

HEALTH DEPARTMENT.



REPORT

ON THE HEALTH OF THE

CITY OF LIVERPOOL

DURING

1912

BY THE

MEDICAL OFFICER OF HEALTH.



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BY

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APPENDIX.

Local Government Board Tables of Population, Births, Deaths, Infantile Mortality and Infectious Sickness.
Plan-Map showing Birth Rate in Districts of City.
,, ,, Death Rate ,, ,,
,, ,, Number of Deaths of Infants under one year out of every 1000 born.
,, ,, Density of Population in Districts of City.
Table of Total Deaths registered in the City.

P R E F A C E.

The year 1912 affords further evidence of the beneficial results of the great measures of sanitation now in operation in the City. The general death-rate, 17·7 per thousand, is the lowest hitherto recorded in Liverpool. The average of the preceding five years is 18·8. These figures present a marked contrast to the average rate of the first five years of the incorporation of Greater Liverpool, which was 23·1.

It will not be overlooked that many deaths are debited to Liverpool of persons coming to the City for the first time to undergo treatment in hospitals, or who were transmigrants from foreign countries, or who were foreign sailors, etc.

The zymotic death-rate was 2·4, nearly one half of this rate being due to measles. But for the epidemic of measles, the rate would have been the lowest on record. The reduction in the zymotic death-rate is owing mainly to the decline in infantile diarrhœa, typhoid fever, and scarlet fever.

One of the most useful methods at the disposal of Sanitary Authorities in combating infectious disease is that of bacteriology. The great importance of this subject is becoming increasingly manifest every year, and when suitable accommodation is provided, there is little doubt that the scope of bacteriological investigation in this City will be very largely increased. The Health Committee has already under consideration an investigation into the etiology of measles. The verification of diagnosis in obscure cases of infectious disease, the systematic examination of rats for plague infection, and many other lines of inquiry, are making claims upon the City Bacteriologist, whilst the demands in connection with Port Sanitation are rapidly increasing.

The rate of mortality from phthisis, although not the lowest recorded, is a considerable improvement on the previous year. It will be recalled that in 1901 a voluntary system of notification of all forms of tuberculosis was initiated in the City. During recent years, under Orders

of the Local Government Board, this notification has from time to time, in certain cases, been made compulsory. The most recent Order of the Local Government Board, which will come into operation on the 1st February, 1913, makes compulsory the notification of all forms of tuberculosis, thus substituting a compulsory for what has hitherto been a voluntary system. Careful observation has been maintained throughout the year in connection with all cases of tuberculosis reported. The whole of the district sanitary staff take part in it, an arrangement which possesses many advantages, and the objects and results of the visitation will be seen in the text (page 56). Here it may be observed that it has been carried out without the slightest friction, and the visits of the inspectors are welcomed.

A scheme was adopted by the City Council in September, 1907, by which 24 beds at the City Hospital, Fazakerley, were devoted to the treatment of cases of Tuberculosis. The great success which attended this experiment sufficiently proved its value, and the number of beds available for cases of pulmonary tuberculosis in the City Hospitals had already been increased to 100, when the application of the National Health Insurance Act facilitated the provision of a still larger number, and encouraged a scheme for dealing with tuberculosis in a comprehensive manner.

Phthisis
patients in
City
Hospitals.

During the year it has been the practice to impart to patients, as far as possible, a knowledge of the chief facts relating to their disease; they have been instructed in the rules of domestic hygiene necessary for the continued improvement of their own health, as well as for the safety of their associates.

School
Children.

The number of school children reported to be suffering from tuberculosis and attending school is a matter of grave importance, and emphasises how necessary it is that some provision should be made to meet the repeated recommendations to the Education Committee to provide special suitable schools for consumptive children. It may be perfectly true that these children are not a danger to others at the moment, but it is equally true that they may become so at any time, and unless they are educated under suitable conditions there is every probability that this will occur; whereas, if they are placed under suitable conditions in the early stages the children themselves will in all likelihood recover. The subject is serious and calls urgently for attention.

In respect of the "After-care" of children, the need of the "Open-air Recovery School" continues to be greatly felt. Very few, if any, children are fit to resume attendance at an ordinary elementary school immediately after their discharge from a sanatorium. The contrast between their previous healthy open-air life at the sanatorium, and the conditions prevailing in an average class-room, is too great, and relapse is the result. In view of this, and in the absence of a school specially adapted for them, children discharged from sanatoria are kept at home for a varying length of time, in some cases for twelve months, before they are able to resume attendance at an elementary school. Practically every child discharged from a sanatorium could at once attend an Open-air Recovery School, and so complete the cure established by the sanatorium, if facilities were offered. The loss of education to the child, and of the Government grant in respect of its education, under the present condition of affairs, is not to be lost sight of.

Perhaps the most gratifying feature of all is the great saving of infant life, the infant mortality being represented by 125 per thousand births as against an average of 144 during the preceding five years. It is of great interest and significance to note that the declining birth-rate, which is a feature in Liverpool, although not to anything like the same extent as in other towns, is more than counterbalanced by the saving of infant life; it is apparent, therefore, that the labour, time, and money expended in various measures for the protection of the infant, are meeting with a very full reward.

An investigation has been carried on for some time past with a view to finding a cheaper method of sterilization of milk. The system at present adopted is to subject the milk to a high temperature for a specified time. Experiments have been made with special electrical apparatus, which, up to the present, have justified the assumption that this process is not only commercially possible, but bids fair to be exceedingly effective.

Typhus fever still appears amongst the diseases notified. During the year six cases of this nature have been reported. One of them was a Russian emigrant, who arrived with the disease, and another was a case of one of the nurses who attended the emigrant. Both patients happily recovered. There were two other cases, one of a woman, aged 41 years,

living in a neighbourhood frequented by emigrants, and the other, also a woman, aged 42 years, living in Burlington Street, the source of whose infection could not be traced. The remaining two cases of illness were obscure in their nature, although the evidence suggested that they were probably typhus.

Typhoid fever

It is gratifying to record the gradual decline of typhoid fever, a decline very definitely associated with certain sanitary measures. It will be seen that a very large proportion of the cases of typhoid fever recorded in the City were imported from elsewhere, or owe their origin to contaminated food stuffs.

Alcoholism.

The returns shew a still further reduction in the number of deaths certified by the Coroner's Jury to be due to excessive drinking. The total number is 107, 74 being males and 33 females. The district in which occurs the largest proportion of deaths due to excessive drinking is also characterised by a high general death-rate, by the large proportion of deaths of persons from that district which occur in workhouses, and by a very excessive infant mortality.

Proposals are now taking shape to provide means of amusement in "People's Halls," suitable to the taste of the poorer class labouring population; these will no doubt have beneficial results.

Midwives Act, 1902.

The valuable work carried out under the Midwives Act has long since passed the experimental stage, and the details referred to on pages 148 to 155 will be read with interest.

National Insurance Act, Maternity Benefit.

Under the National Insurance Act, further and, it is believed, equally beneficent legislation will come into operation in January, 1913. By Section 8, Sub-section (1), (e), of that Act, a sum of 30s. will be available for "Payment in the case of the confinement of the wife or, where the child is a posthumous child, of the widow of an insured person, or of any other woman who is an insured person," in the form of "maternity benefit," a sum which, in the vast majority of cases, will be very helpful, either in the provision of necessities or in part payment of medical or emergency attendance.

The whole subject is receiving very careful attention from the various parties concerned, and it is hoped that an arrangement will be come to by the midwives, with the co-operation of the Health Committee, which will largely extend to every midwife the right to call in medical aid in any emergency. The arrangement may result in relieving the Health Committee, to an extent, of certain voluntary obligations which it has undertaken, without adding to the burden of the insured person.

Briefly the suggestion is that each midwife should make a contribution out of her remuneration in every case which she attends. It is believed that the sum so provided would be sufficient to pay for all emergency assistance without depleting the 30s. intended for the benefit of the patient.

At the request of the Chairman of the Education Committee the Medical Officer reported upon the complex and difficult question of the incidence of measles (see page 34).

Measles occurs in epidemic waves of varying duration and intensity, and the mortality rate is influenced to a considerable extent by the season of the year at which the epidemic prevails. The fatal incidence occurs chiefly amongst infants below two years of age. Attacks of measles, therefore, at that age are more dangerous to life than if they can be postponed to a later age. Measles and
School
Closure.

One great difficulty in ensuring hospital isolation for cases of measles, on the same lines that it can be ensured for scarlet fever, for example, is the tender age of the patient. It is not wise to separate a very young patient from the mother, and unless the mother can accompany the child to hospital it is frequently undesirable to remove it, no matter how unremitting the nurses may be in their attention, and it often happens that the mother cannot be spared from her domestic duties, hence the sick child remains at home.

If it must be granted that measles is inevitable, the foregoing facts point to two definite objects to be aimed at; one is to postpone the disease as long as possible, and the other is to endeavour to avoid the occurrence of the outbreak during the winter months.

Amongst the poor and ignorant mothers it is not an uncommon practice, when measles breaks out in the house, to put those children who have not already suffered, with the sufferers, in order that they may all have the disease together, and get it over. This is, of course, a wholly indefensible procedure, but it is not unlikely that a few Managers of schools may, in view of the recurrence of outbreaks of measles, share the view that the school may as well get it over and have done with it, and that efforts to postpone what is inevitable are not worth the trouble and inconvenience of making, and in any event are ultimately futile.

A little consideration, however, would dispel this view. There is no one, for example, who does not do all he can to postpone death, notwithstanding that he is perfectly well aware that his efforts in the long run will be futile.

The Medical Inspection of School Children which has been carried on throughout the year has formed the subject of a report to the Education Committee. Its value, however, as a direct sanitary measure, from the standpoint of improving the public health, is plainly evident.

Female
Staff.

The staff of the Health Committee have rendered great assistance in following up neglected children, and have been instrumental in ensuring treatment for a very large number who as a result of the Medical Inspection were found to stand in need of it. The families to which many of these children belonged were already known to the staff. The co-operation of the Friendly Visitors of the Central Relief and Charity Organisation Society has been most valuable.

Housing.

The Housing Committee have continued their policy of not only demolishing slums, but of re-housing in sanitary dwellings the persons dispossessed, and the improving conditions in health and social circumstances of the persons re-housed becomes increasingly apparent year by year. It would, of course, be idle to expect that the occupants of insanitary areas who are transferred to a sanitary area should immediately forsake all the old habits which a lifetime of insanitation had engendered. As a matter of fact many of them still need, and still look to, the advice and friendly guidance of the sanitary staff, and it is eminently desirable that no person should be appointed as caretaker of these dwellings who has not some elementary knowledge of the principles of sanitation.

Unfortunately the infant mortality in these dwellings has not been reduced to an extent which one might reasonably have hoped for, a circumstance which emphasises the necessity for a still closer supervision and instruction of the mothers.

During the year, over 900 insanitary houses have been dealt with; of this number over 600 were aggregated in courts and alleys in circumscribed districts which were scheduled as unhealthy areas. They were of the usual type of insanitary house, and the areas were dealt with as a whole. They had been characterised by the usual amount of sickness and mortality.

As heretofore, the Housing Committee have pursued their practice of buying out licensed premises in these slum districts, and in this connection the action of the Licensing Justices in reducing the number of redundant and unnecessary licenses has been of the utmost assistance.

The number of dwellings provided by the Corporation is now 2,727; and between them they house over 10,000 persons. The great majority of the dwellings are reserved for the dispossessed, but additional claimants have been found amongst those affected by the action of the Health Committee in rendering illegal the occupation of insanitary cellar dwellings.

There are approximately some 2,900 houses of what are known as the back-to-back type still remaining to be dealt with; besides this there are, in different parts of the city, houses which are very far removed from modern requirements and modern bye-laws, or what are now regarded as conditions necessary for healthy occupation. Structural alterations, however, would go a long way towards meeting the difficulties in this class of property, and it was in respect of houses such as this that a clause was proposed for insertion in the present Corporation Bill to facilitate re-construction by rendering financial aid to owners, much on the same principle as compensation was available under the Liverpool Act of 1864 for the improvement and demolition of insanitary property.

The Committee have approved of closing orders being obtained in the case of insanitary dwellings in isolated positions, where the whole of the little group can be dealt with simultaneously. Closing Orders.

Abattoirs.

No solution has been found of the difficulties in connection with the provision of suitable abattoir accommodation. The slaughtering of animals is still carried on in numerous premises throughout the city eminently unsuitable for the purpose, difficult of supervision, and which render the prevention of nuisances impossible.

School of Hygiene.

The methods of public instruction at the University School of Hygiene in subjects affecting general sanitation have been largely availed of, not only by doctors, school teachers, sanitary inspectors, and those whose trades have a special significance in connection with public health, but the general public show an increasing interest in the records and illustrations of the municipal work and its results, which are exhibited at the School at Ashton Hall. In most Continental towns the value of this line of action as an accessory in the improvement of the health of cities is fully recognised, and no one can doubt that a complete illustrative exhibition contrasting the condition of Liverpool of, say, fifteen or twenty years ago, with the condition of Liverpool to-day, would be invaluable as showing what the measures have actually been which have effected so great an improvement in the health and comfort of the citizens. The advantage of an educative measure which would enable the public to realise what has been done for them during that time is obvious. A great impediment to sanitary progress is the fact that the more successful the measures are, the less apparent is the need for them; in other words, the insanitary conditions have been so effectively dealt with that every trace of them has been removed. Unless there is some way of making clear to the average intelligence what the sanitary operations have consisted of, and what has been the result, the magnitude of the work is entirely overlooked or forgotten.

E. W. HOPE,

MEDICAL OFFICER OF HEALTH.

PUBLIC HEALTH DEPARTMENT,

MUNICIPAL OFFICES,

LIVERPOOL, *May 1st*, 1913.

CENSUS OF ENGLAND AND WALES, 1911—LIVERPOOL COUNTY BOROUGH.

Ages of Males and Females in each Registration Sub-District and in the Civil Parishes of Wavertree and Garston.

Ages.				LIVERPOOL REGISTRATION DISTRICT.				TOXTETH PARK REGISTRATION DISTRICT.								WEST DERBY REGISTRATION DISTRICT.																			
				Scotland Sub-District.		Exchange Sub-District.		Abercromby Sub-District.		Toxteth Park North-West Sub-District.		Toxteth Park South-West Sub-District.		Toxteth Park Central Sub-District.		Toxteth Park East Sub-District.		Fazakerley Sub-District (part of)		Walton Sub-District.		Kirkdale Sub-District.		North Everton Sub-District.		South Everton Sub-District.		West Derby Western Sub-District.		West Derby Eastern Sub-District.		Wavertree Sub-District (part of).			
																																Garston Civil Parish.		Wavertree Civil Parish.	
				Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Female	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females		
All Ages				22,878	23,698	19,370	18,000	21,453	23,274	10,826	11,168	17,331	18,426	20,168	23,723	14,455	20,043	2,436	2,719	35,874	39,717	33,956	33,507	26,445	27,791	32,572	34,057	41,463	44,020	28,810	34,399	11,590	12,262	18,433	21,537
Under 1 year				784	836	509	478	401	428	343	330	526	530	484	443	305	270	50	51	980	962	954	855	862	82	939	896	1,175	1,045	749	762	319	295	504	482
1				672	667	414	423	344	338	259	285	510	464	456	431	241	251	64	44	858	854	880	814	771	749	834	806	1,070	1,047	668	662	291	263	494	489
2				705	711	443	392	379	402	291	329	529	546	471	490	265	296	74	79	976	879	840	864	765	801	873	879	1,117	1,091	715	684	318	314	503	490
3				683	689	456	431	389	381	274	263	513	508	438	481	307	243	60	58	833	818	861	913	786	788	817	802	1,046	1,085	704	695	284	295	487	476
4				677	633	428	388	390	369	286	336	495	510	488	474	289	298	73	62	785	878	803	859	739	763	820	863	1,109	1,089	713	698	329	285	493	477
5				636	634	381	439	389	392	272	297	474	490	462	452	279	269	88	101	789	793	834	857	754	738	822	759	1,040	1,020	667	668	281	287	438	488
6				607	549	379	384	379	405	240	307	491	481	489	483	268	269	75	65	835	799	773	817	691	656	755	815	1,026	972	708	719	269	285	416	467
7				560	585	394	369	371	410	265	232	444	466	459	433	270	261	84	85	712	742	751	794	770	711	757	710	1,034	1,009	681	684	247	296	431	420
8				547	558	346	389	357	393	257	283	478	444	435	444	248	276	72	75	768	736	737	769	687	694	785	765	894	978	672	688	231	286	439	427
9				564	548	374	327	345	412	256	254	425	425	408	440	217	257	95	80	725	727	794	773	666	673	724	726	1,001	981	652	685	266	239	428	420
10				514	548	370	362	354	396	276	254	380	444	420	428	265	259	102	69	673	722	720	715	659	649	735	768	925	924	620	677	270	236	501	406
11				500	502	370	351	393	390	220	234	394	377	419	440	246	255	75	59	696	694	770	680	648	612	725	743	929	900	612	676	249	223	423	413
12				481	521	322	329	344	386	259	207	348	393	429	433	236	250	84	81	662	697	674	721	602	582	712	667	884	908	608	626	249	229	448	410
13				450	437	364	317	324	389	244	236	333	363	390	421	246	275	79	84	701	634	684	693	624	640	788	731	875	857	590	619	222	219	410	410
14				415	460	316	316	389	403	233	193	346	360	417	432	267	262	77	61	635	671	664	685	609	600	762	713	880	818	578	623	198	233	377	373
15				427	470	322	334	369	410	205	244	314	366	408	412	239	293	45	43	625	670	611	717	575	507	773	684	833	834	527	575	184	225	331	369
16				438	433	304	350	375	405	224	208	349	320	366	418	251	352	31	57	650	682	657	599	527	550	696	656	857	842	532	627	210	214	298	344
17				402	440	324	318	360	429	187	186	291	316	392	404	258	351	37	53	590	700	619	594	508	497	653	689	794	823	519	639	197	204	310	362
18				413	417	332	334	371	506	202	219	321	309	450	443	234	404	46	37	598	676	640	589	520	507	650	637	817	778	512	689	189	229	295	320
19				340	389	337	337	388	500	198	190	286	291	377	419	247	378	46	29	654	642	641	615	438	477	560	634	818	817	485	655	210	221	243	368
20				378	398	345	355	427	544	159	180	294	279	332	394	246	422	29	53	548	624	579	530	463	475	568	602	699	751	471	637	193	222	284	337
Under 5 years				3,521	3,536	2,250	2,112	1,903	1,918	1,453	1,543	2,573	2,558	2,337	2,319	1,407	1,358	321	294	4,432	4,391	4,338	4,305	3,923	3,922	4,283	4,246	5,517	5,357	3,549	3,501	1,541	1,452	2,481	2,414
5 and under 10				2,914	2,874	1,874	1,908	1,841	2,012	1,290	1,373	2,315	2,306	2,253	2,252	1,282	1,332	414	406	3,829	3,797	3,889	4,010	3,568	3,472	3,843	3,775	4,995	4,960	3,380	3,444	1,294	1,393	2,152	2,222
10				2,360	2,468	1,742	1,675	1,804	1,964	1,232	1,124	1,801	1,937	2,075	2,154	1,260	1,301	417	354	3,367	3,418	3,512	3,494	3,142	3,083	3,722	3,622	4,493	4,407	3,008	3,221	1,188	1,140	2,159	2,012
15				2,020	2,149	1,619	1,673	1,863	2,250	1,016	1,047	1,561	1,602	1,993	2,096	1,229	1,778	205	219	3,117	3,370	3,168	3,114	2,568	2,538	3,332	3,300	4,119	4,094	2,575	3,185	990	1,093	1,477	1,763
20				1,790	2,036	1,705	1,746	2,114	2,571	850	943	1,423	1,562	1,835	2,132	1,198	2,201	158	275	2,872	3,570	2,820	2,798	2,202	2,376	2,695	3,067	3,469	3,907	2,338	3,157	962	1,140	1,386	1,878
25				1,849	2,114	1,630	1,569	1,973	2,154	845	890	1,430	1,565	1,669	2,154	1,227	2,173	153	223	3,036	3,840	2,643	2,815	2,154	2,378	2,577									

STATISTICS

RELATING TO

BIRTHS, DEATHS, AND CAUSES OF DEATH, &c.,
ZYMOTIC DISEASES AND THEIR INCIDENCE.

SUMMARY

OF

VITAL STATISTICS FOR 1912.

Area of City	16,619	Acres. (26 square miles)
Population (estimated to the middle of the year)	752,021	
*Density	45·2	Persons per Acre.
*Births	22,233,	Birth-rate 29·5.
*Deaths	13,364,	Death-rate 17·7.
*Infantile Mortality	2,778	Deaths under one year, or 125 per 1,000 Births.
Zymotic Death-rate (7 principal Zymotic Diseases)	2·4	per 1,000.
Phthisis Death-rate	1·4	per 1,000.

* For variations in different districts see plan-map in the Appendix.

BIRTHS.

During the fifty-two weeks of the year, terminating on Saturday, December 28th, 1912, the returns of the local registrars recorded 22,233 births within the City, equal to a rate of 29·5 per 1,000 of the population, the average of the previous five years (1907-1911) being 31·5. The rates are calculated upon the corrected population as ascertained by the Census Returns of 1901 and 1911. Of the total births 11,320 were males and 10,913 were females. The number of illegitimate births was 837, or 3·7 per cent. of the total births.

The birth-rate in the City of Liverpool is considerably above the average of the great towns, as well as of England and Wales taken as a whole (see diagram, page 6).

The variations in the birth-rate, and the distribution of the births in the different wards and districts of the city, are indicated upon the accompanying plan-map (see Appendix), and have also been arranged in the following tables:—

BIRTHS.

DISTRICTS.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		1912.		Per-centage born in work-houses and other institu-tions.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Births.	Rate per 1000	
Scotland	244	218	253	278	229	234	238	244	1938	41.7	7.8
Exchange	173	138	134	140	156	167	153	138	1199	32.1	19.1
Abercromby	128	142	139	106	97	80	118	116	926	21.0	14.6
Everton	491	487	517	501	524	482	555	553	4110	34.0	7.0
Kirkdale	278	272	277	259	259	273	270	273	2161	32.1	3.6
West Derby—West	335	280	335	321	334	308	339	347	2599	30.4	6.7
Toxteth	426	393	362	403	393	377	372	388	3114	30.8	4.0
Walton	275	252	239	267	248	264	278	261	2084	27.1	2.1
West Derby—East	191	199	194	187	217	207	207	172	1574	24.2	3.1
Wavertree	156	129	134	126	153	133	145	131	1107	26.2	2.4
Toxteth—East	69	67	86	71	86	74	83	52	588	16.7	1.8
(late Toxteth Rural)											
Garston	88	79	92	101	109	92	89	81	731	29.4	1.3
Fazakerley.....	11	14	10	11	20	14	11	11	102	17.4	0.9
City.....	2865	2670	2772	2771	2825	2705	2858	2767	22233	29.5	6.0

The births in the Maternity Hospital and in the Parish Workhouse (Brownlow Hill), Mill Road Infirmary, Walton Workhouse and Toxteth Workhouse have been transferred to the Districts from whence the mothers were admitted.

The continued high birth-rate in the older and poorer parts of the city is a noticeable feature, being in some instances higher than in the rapidly-extending areas in the suburbs.

In Toxteth East (late Toxteth Rural) the large proportion of domestic employés partially accounts for the low birth-rate.

The following table shows the population, number of births, and the corrected birth-rate per 1,000 during the last twenty-five years:—

Year.	Population.	No. of Births.	Rate per 1,000.
1888	527,233	17,777	33·7
1889	523,838	17,676	33·7
1890	520,466	17,592	33·8
1891	518,302	17,832	34·4
1892	519,590	17,758	34·2
1893	520,882	18,328	35·2
1894	522,178	17,893	34·3
*1895	652,523	22,006	33·7
1896	658,050	21,943	33·3
1897	663,633	22,280	33·6
1898	669,243	22,227	33·2
1899	674,912	22,488	33·3
1900	680,628	22,762	33·4
1901	686,332	21,980	32·0
** 1902	707,027	24,283	34·2
1903	710,874	23,910	33·6
1904	714,743	24,278	33·9
*** 1905	721,864	24,350	33·7
1906	726,100	24,123	33·2
1907	730,361	23,654	32·3
1908	734,648	23,891	32·5
1909	738,960	23,591	31·9
1910	743,295	23,054	31·0
1911	747,627	22,493	30·0
1912	752,021	22,233	29·5

The foregoing table shows the decrease in the birth-rate during the last 25 years. This decrease has, however, been even more pronounced in other parts of the country, and notwithstanding the decline in Liverpool, the birth-rate in this city is still amongst the highest, being exceeded by only one town having a population of more than 200,000.

The rates have been calculated upon the corrected population as ascertained by the Census Returns of 1891, 1901, and 1911.

* City area extended, a population of 129,045 included.

** Garston included with a population of 17,289.

*** Fazakerley included with a population of 2,892.

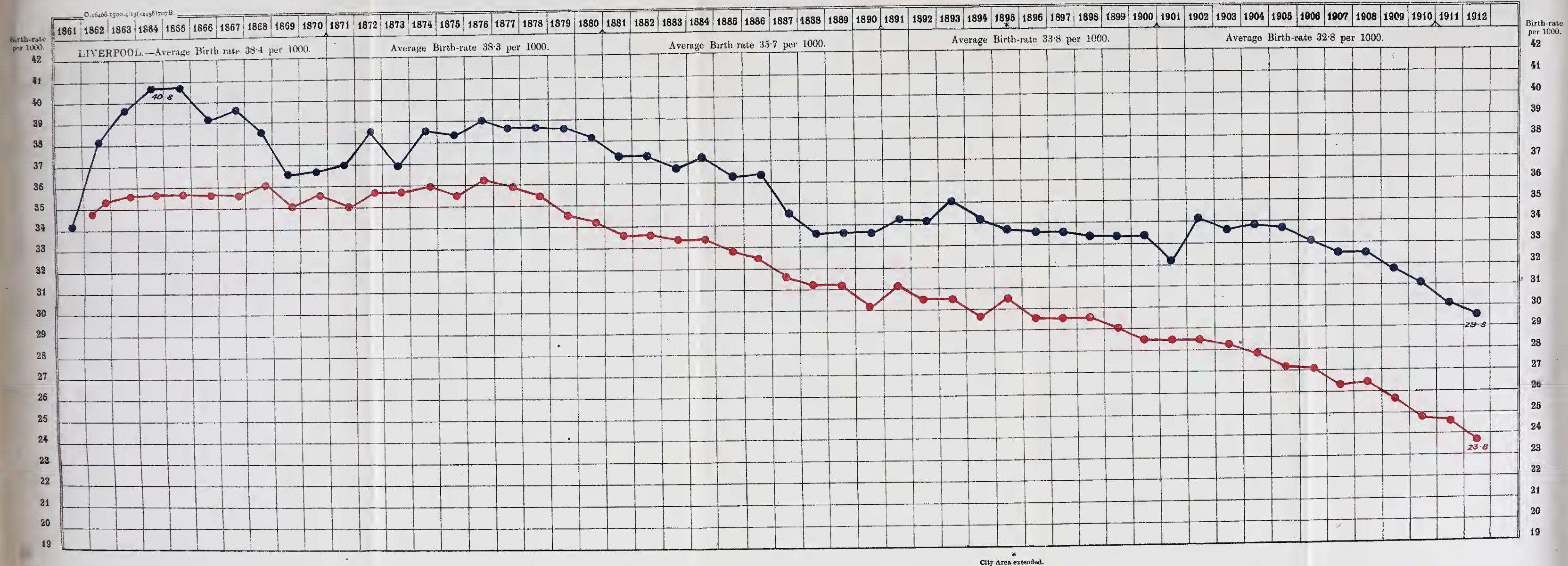
The following table shows the *natural* increase of population, that is, the increase in the number of births as compared with the number of deaths during the year 1912, in the several districts of the city. The net result in the city showing an increase of births over deaths of 8,869.

DISTRICTS.						Population.	Births.	Deaths.	Number of Births over Deaths.
Scotland	...	...	...	...	...	46,433	1,938	1,335	603
Exchange	...	...	...	...	...	37,345	1,199	1,075	124
Abercromby	...	...	...	...	...	44,135	926	876	50
Everton	...	...	...	...	...	120,824	4,110	2,466	1,644
Kirkdale	...	...	...	...	...	67,232	2,161	1,232	929
West Derby—West	...	...	...	...	...	85,370	2,599	1,486	1,113
Toxteth	...	...	...	...	...	100,853	3,114	1,909	1,205
Walton	...	...	...	...	...	76,938	2,084	886	1,198
West Derby—East	...	...	...	...	...	64,852	1,574	818	756
Wavertree	...	...	...	...	...	42,272	1,107	478	629
Toxteth—East	...	...	...	...	...	35,079	588	395	193
(late Toxteth Rural)	...	...	...	...	...
Garston	...	...	...	...	...	24,843	731	354	377
Fazakerley	...	...	...	...	...	5,845	102	54	48
City ...						752,021	22,233	13,364	8,869
Deaths of persons brought into Hospitals, Workhouses, Nursing Homes, &c., from outside the City						—	—	639	—
Total ...						752,021	22,233	14,003	—

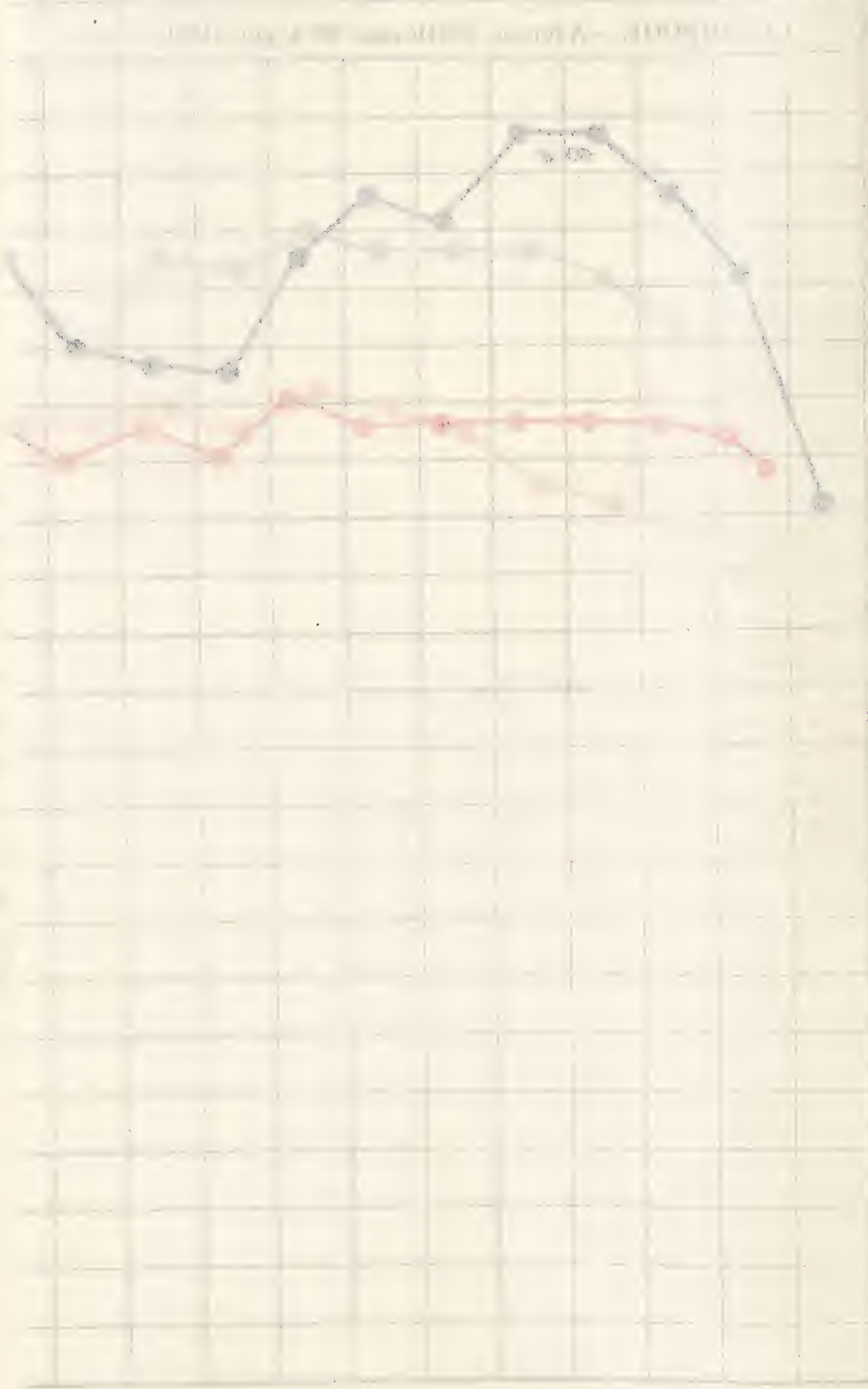
BIRTH RATE, 1861-1912.

The BLUE line denotes the Birth Rate of Liverpool.

The RED " " " " England and Wales.

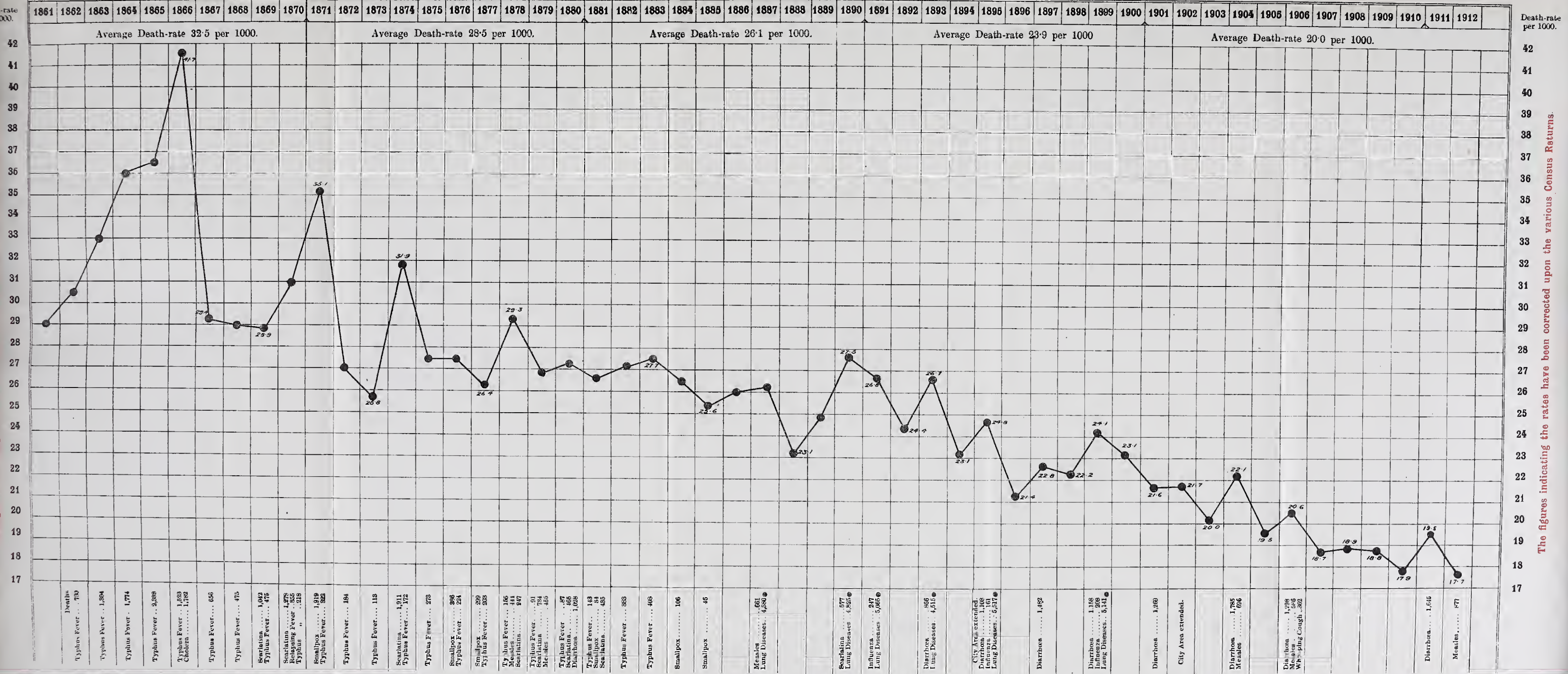


1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100



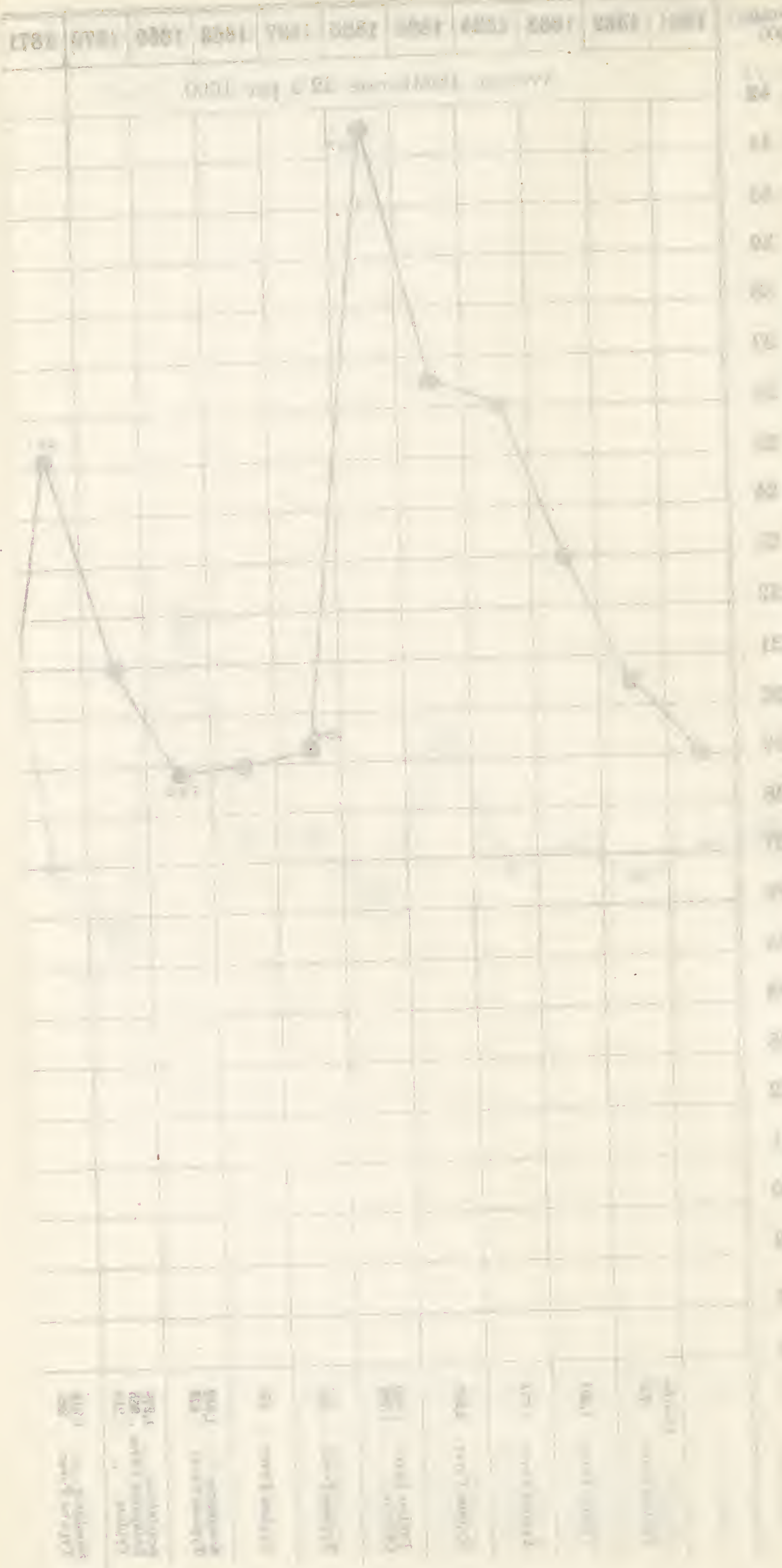
CITY OF LIVERPOOL. DEATH RATE, 1861-1912.

The figures indicating the rates have been corrected upon the various Census Returns.



The figures indicating the rates have been corrected upon the various Census Returns.

THE FOLLOWING TABLE SHOWS THE RESULTS OF THE INVESTIGATION



DEATHS.

The total death-rate of the city during the year was 17·7 per 1,000, the lowest recorded in Liverpool; the average rate of the ten years following the extension of the city boundaries (1896-1905) was 21·8, and that of the last seven years (1906-1912) was 18·9. The deaths in public institutions, nursing homes, &c., of 639 non-residents, equal to 0·8 per 1,000, have been eliminated from the total deaths.

Quite apart from conditions of sanitation, mortality varies widely at different age-periods, as the next table shows; consequently the death-rate of the community is largely influenced by the proportions living at each age-period; the effect of a high birth-rate in raising the crude death-rate is well seen by the table, which also indicates plainly enough how the crude returns are modified if there happens to be an unusual proportion of the population at any one age-period. A hospital for foundlings, or a home for aged people, will have a very different influence upon the mortality returns of the district than a school containing an equal number of boys from 10 to 15 years of age.

If, for example, we could conceive that the whole population of Liverpool consisted of persons between the ages of 20 and 30, the death-rate last year would have been 3·6 per 1,000; if, on the other hand, we could conceive that it consisted entirely of people above 60 years of age, the death-rate would be 80·7 per 1,000. It is plain that any variation in the *proportions* living at the respective age-periods would affect the death-rate, and this with absolutely no change whatever in the condition of municipal sanitation. These proportions, however, vary very slowly and very slightly year by year in each district, so that yearly comparisons of the mortality-rate of the same district may be fairly made, but one district must not be put into comparison with another unless the age and sex conditions of each are known, and the necessary corrections made.

THE FOLLOWING TABLE SHOWS THE ANNUAL RATE OF MORTALITY PER 1,000 AT EACH OF TWELVE AGE-PERIODS DURING LAST YEAR IN LIVERPOOL, AS WELL AS THE TOTAL NUMBER OF DEATHS.

THE DIFFERENCES WHICH THE FIGURES SHOW ARE VERY STRIKING:—

1912.	* Under 1 year.	1 to 2	2 to 5	5 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 and up- wards.	Total at all Ages.
Rate of Mortality per 1,000 living at ages indicated.	125.0	66.5	18.6	4.5	2.7	3.6	8.4	15.4	27.6	55.5	132.4	203.8	17.7
Total Number of Deaths at each Age-Period.	2778	1219	986	364	404	525	916	1219	1431	1619	1455	448	13364
Approximate Population	21269	18322	52841	81009	149651	145951	108542	78920	51870	30459	10989	2198	752021

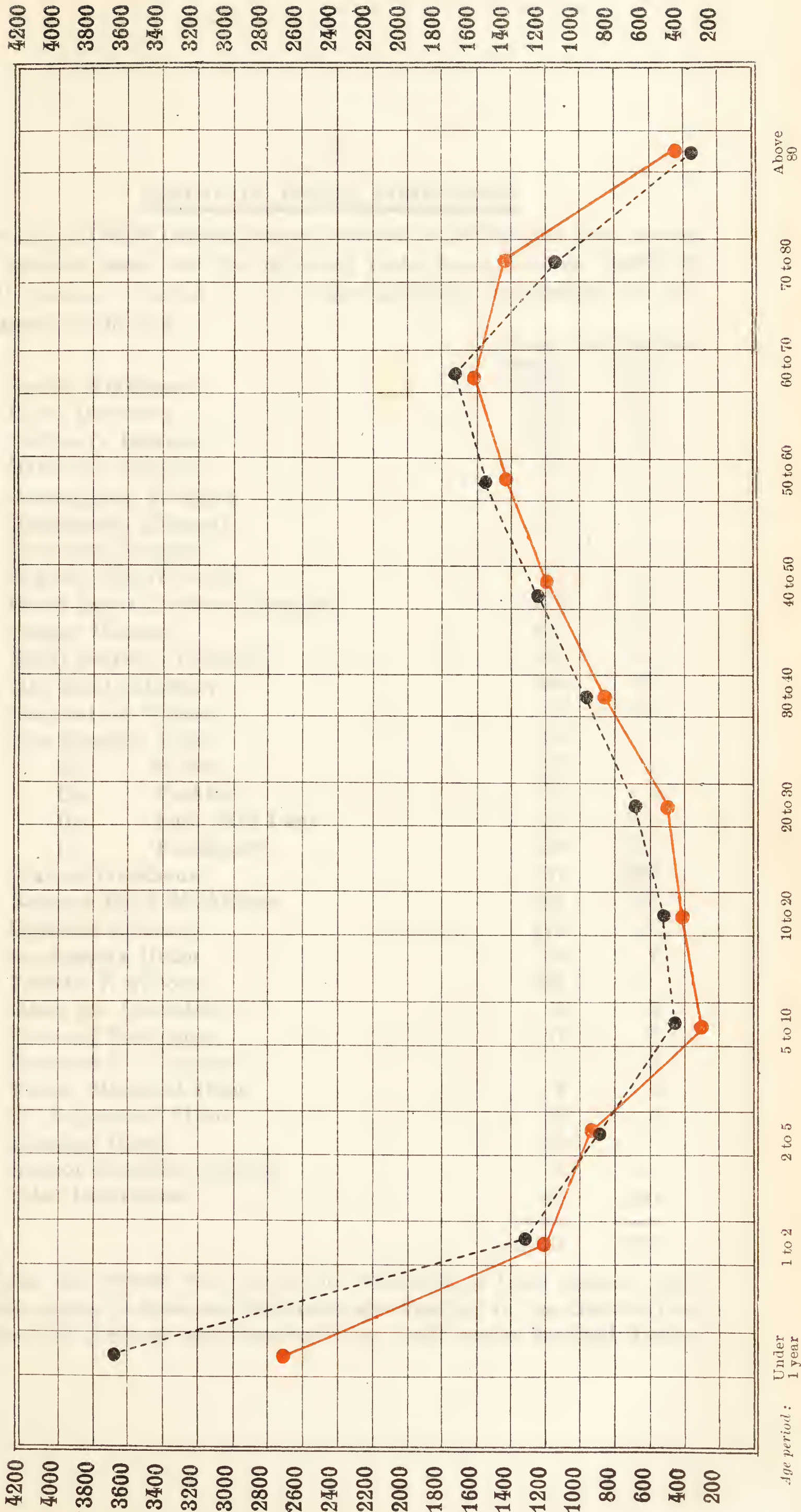
(See Comparative Chart on next page).

* Column I. indicates the rate of mortality under one year per 1,000 births during the year.

CITY OF LIVERPOOL.

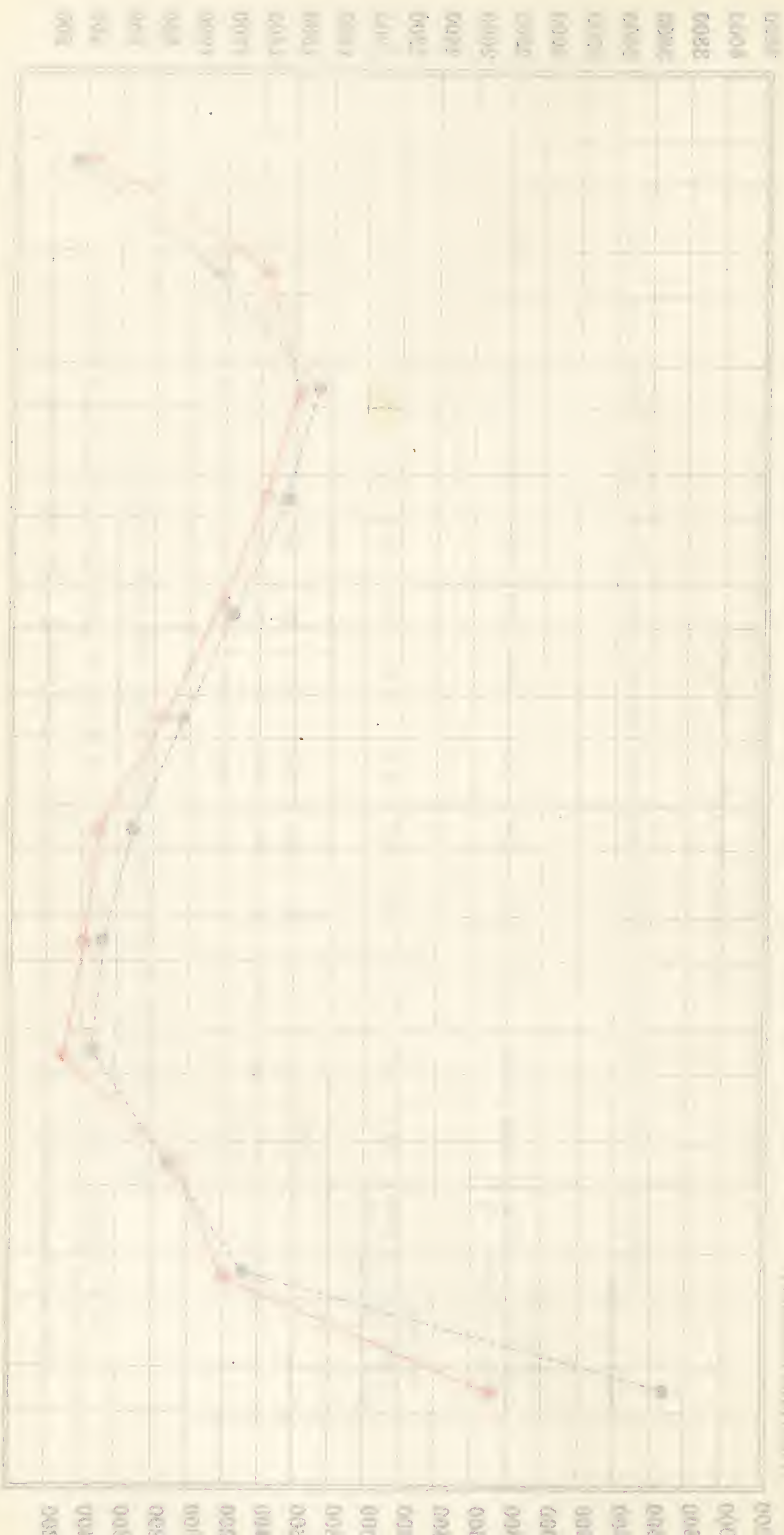
Comparative view of the total number of Deaths at twelve different age periods during the year 1912 shown in Red, the average for the preceding Ten years (1902-1911), being shown in the Black dotted line.

O.16550.1500.5.13(34695)697 L.



The following table shows the results of the tests made on the water supply of the city of New York, and the results of the tests made on the water supply of the city of New York, and the results of the tests made on the water supply of the city of New York.

(Continued from page 10)



DEATHS IN PUBLIC INSTITUTIONS

Deaths in Public Institutions are referred to the Districts from whence the patients came, but the following table shows that the deaths of 5,381 persons occurred in the undermentioned Institutions for the treatment of the sick:—

					Total Deaths.	Non-Residents of City.
Parish Workhouse	...	...	...	...	1016	12
Royal Infirmary	...	...	...	...	272	82
Children's Infirmary	...	...	...	...	190	20
Maternity Hospital	...	...	...	...	33	2
Consumption Hospital	...	...	...	...	7	1
Hahnemann Hospital	...	...	...	...	10	—
Samaritan Hospital	...	...	...	...	6	1
Eye and Ear Infirmary	...	...	...	...	9	4
David Lewis Northern Hospital	...	...	...	...	194	40
Stanley Hospital	...	...	...	...	151	39
Royal Southern Hospital	...	...	...	...	193	19
Mill Road Infirmary	...	...	...	...	944	85
Hospital for Women	...	...	...	...	32	24
City Hospital North	...	...	...	...	69	3
Do. South	...	...	...	...	65	1
Do. Parkhill	...	...	...	...	92	1
Do. East, Mill Lane	...	...	...	...	59	—
Do. Fazakerley	...	...	...	...	159	10
Walton Workhouse	...	...	...	...	937	206
Belmont Road Workhouse	...	...	...	...	151	20
Highfield Infirmary	...	...	...	...	173	—
St. Joseph's Home	...	...	...	...	24	7
Toxteth Workhouse	...	...	...	...	447	—
Home for Incurables	...	...	...	...	8	3
House of Providence	...	...	...	...	11	7
Tuebrook Villa Asylum	...	...	...	...	5	3
Turner Memorial Home	...	...	...	...	7	2
St. Augustine's Home	...	...	...	...	19	6
Kirkdale Home	...	...	...	...	46	—
Garston Accident Hospital	...	...	...	...	6	—
Other Institutions	...	...	...	...	46	20
					5,381	618

From the returns made as to the residences of these persons, 4,643 of the deaths in these establishments are classified in the districts from whence the patients were removed, viz.:—463 under Scotland district,

595 under Exchange district, 410 under Abercromby district, 940 under Everton, 394 under Kirkdale, 520 under West Derby (West), 644 under Toxteth, 218 under Walton, 170 under West Derby (East), 122 under Wavertree, 68 under Toxteth-East (late Toxteth Rural), 88 under Garston, and 11 under Fazakerley; 618 were non-residents, who had sought relief in Liverpool Institutions, and of the remainder, 120 were persons whose previous residences were unknown, and these, in the absence of definite information, have been placed in the wards in proportion to the total number of deaths. In addition to the foregoing 618 non-residents, 21 others who were only temporarily resident in the City have been excluded from the total deaths.

In Liverpool the proportion of deaths which takes place in Public Institutions is larger than is the case in other towns, and the fact is an interesting one, as something may be learned of the social conditions of a locality when so large a proportion in times of sickness seek refuge in public institutions, more especially in the workhouses. Generally it implies poverty and want; but on the other hand, it may also, and no doubt does, imply that the institutions have a wide reputation, and attract sufferers to them not only from within the city, but from a distance. Probably both of these conditions exercise influence; but be that as it may, the fact remains that there is no provincial city in which so large a proportion of the deaths takes place in workhouses and hospitals.

The following table shows the percentage of deaths which have occurred in public institutions during the five years, 1908-1912, in the great towns of Birmingham, Leeds, Manchester and Liverpool:—

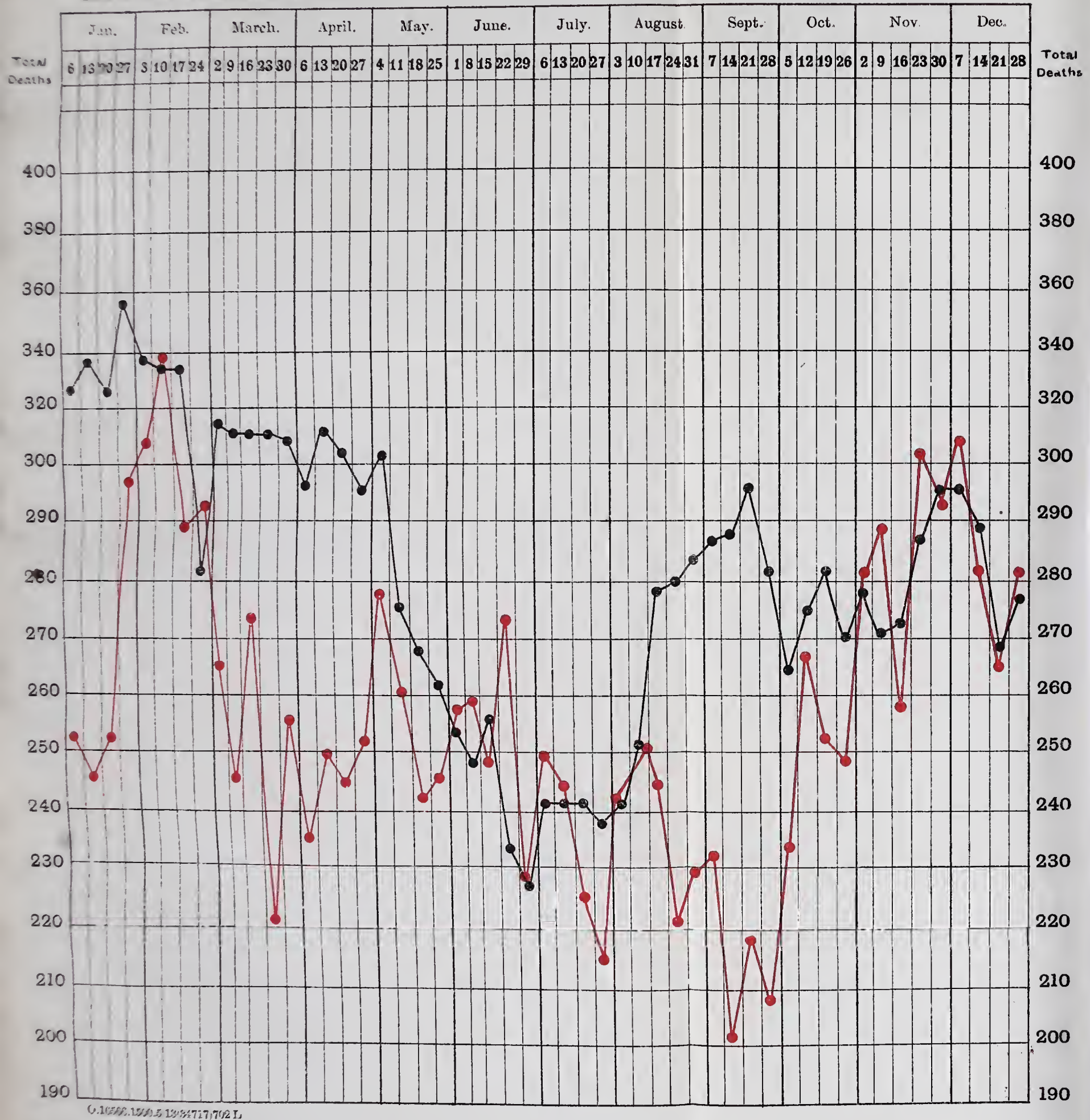
	1908.	1909.	1910.	1911.	1912.	Average.
Birmingham	26·0	24·8	27·1	24·9	24·5	25·5
Leeds	17·2	19·7	18·9	20·1	23·8	19·9
Manchester	26·3	29·1	28·5	28·1	29·8	28·4
Liverpool	36·2	36·5	37·8	36·5	38·4	37·1

The results of the allocation of deaths in public institutions to the districts from whence the patients had been removed, and the addition of these to the number of deaths of residents in those various districts,

CITY OF LIVERPOOL.

COMPARATIVE MORTALITY CHART.

The Red line denotes the weekly number of Deaths from all causes during the year 1912; the Black line the average weekly number of deaths from all causes during the preceding five years.



Measles prevalent from the end of May to the beginning of August, and from the beginning of October to the end of the year.

COMPARATIVE MORTALITY

The Red line denotes the weekly number of Deaths from all causes. The average weekly number of Deaths from all causes.

are shown in the following table, from which a calculated rate of mortality per 1,000 per annum of the inhabitants has been made. The rates are calculated upon the corrected population as ascertained by the Census Returns of 1901 and 1911.

DISTRICTS.	Population.	1912.		Corrected Average Rate per 1000 during the five years 1907-1911.
		Deaths.	Rate per 1000	
Scotland	46,433	1,335	28·7	30·7
Exchange...	37,345	1,075	28·7	31·2
Abercromby	44,135	876	19·8	19·5
Everton	120,824	2,466	20·4	20·8
Kirkdale	67,232	1,232	18·3	19·8
West Derby (West)	85,370	1,486	17·5	17·8
Toxteth	100,853	1,909	18·9	19·1
Walton	76,938	886	11·5	12·7
West Derby (East)	64,852	818	12·6	14·3
Wavertree	42,272	478	11·3	12·3
Toxteth (East) (late Toxteth Rural)	35,079	395	11·2	11·1
Garston... ..	24,843	354	14·2	14·5
Fazakerley	5,845	54	9·2	11·4
City	752,021	13,364	17·7	18·8

The District Registrars' Returns show that there were 30 deaths (23 of women and 7 of men) at the age of 90 and upwards, viz., 3 males and 8 females at 90, 2 males and 5 females at 91, 1 male and 4 females at 92, 1 female at 93, 3 females at 94, 1 female at 96, 1 male at 97, and 1 female at 98.

The death-rate per 1,000 for 1912 in each of the districts of the city is indicated upon the map at the end of the volume. Scotland and Exchange districts, it must be remembered, contain a great number of common lodging-houses, some of which are resorted to by non-residents of the districts, persons of migratory habits, and the indigent and broken-down persons to be met with in any seaport in which casual and unskilled labour is a feature. This class tends to swell the mortality of these two districts. Last year the rate in Scotland district was increased by nearly one per 1,000, and in Exchange district by between three and four per 1,000 from this cause.

The following table shows the population, number of deaths, and the corrected death-rate per 1,000 during the last twenty-five years:—

Year.	Population.	No. of Deaths.	Rate per 1,000.
1888	527,233	12,159	23·1
1889	523,838	13,047	24·9
1890	520,466	14,293	27·5
1891	518,302	13,911	26·8
1892	519,590	12,671	24·4
1893	520,882	13,919	26·7
1894	522,178	12,073	23·1
*1895	652,523	16,215	24·8
1896	658,050	14,060	21·4
1897	663,633	15,117	22·8
1898	669,243	14,853	22·2
1899	674,912	16,276	24·1
1900	680,628	15,785	23·1
1901	686,332	14,879	21·6
**1902	707,027	15,396	21·7
1903	710,874	14,240	20·0
1904	714,743	15,851	22·1
***1905	721,864	14,103	19·5
1906	726,100	15,001	20·6
1907	730,361	13,676	18·7
1908	734,648	13,930	18·9
1909	738,960	13,945	18·8
1910	743,295	13,343	17·9
1911	747,627	14,607	19·5
1912	752,021	13,364	17·7

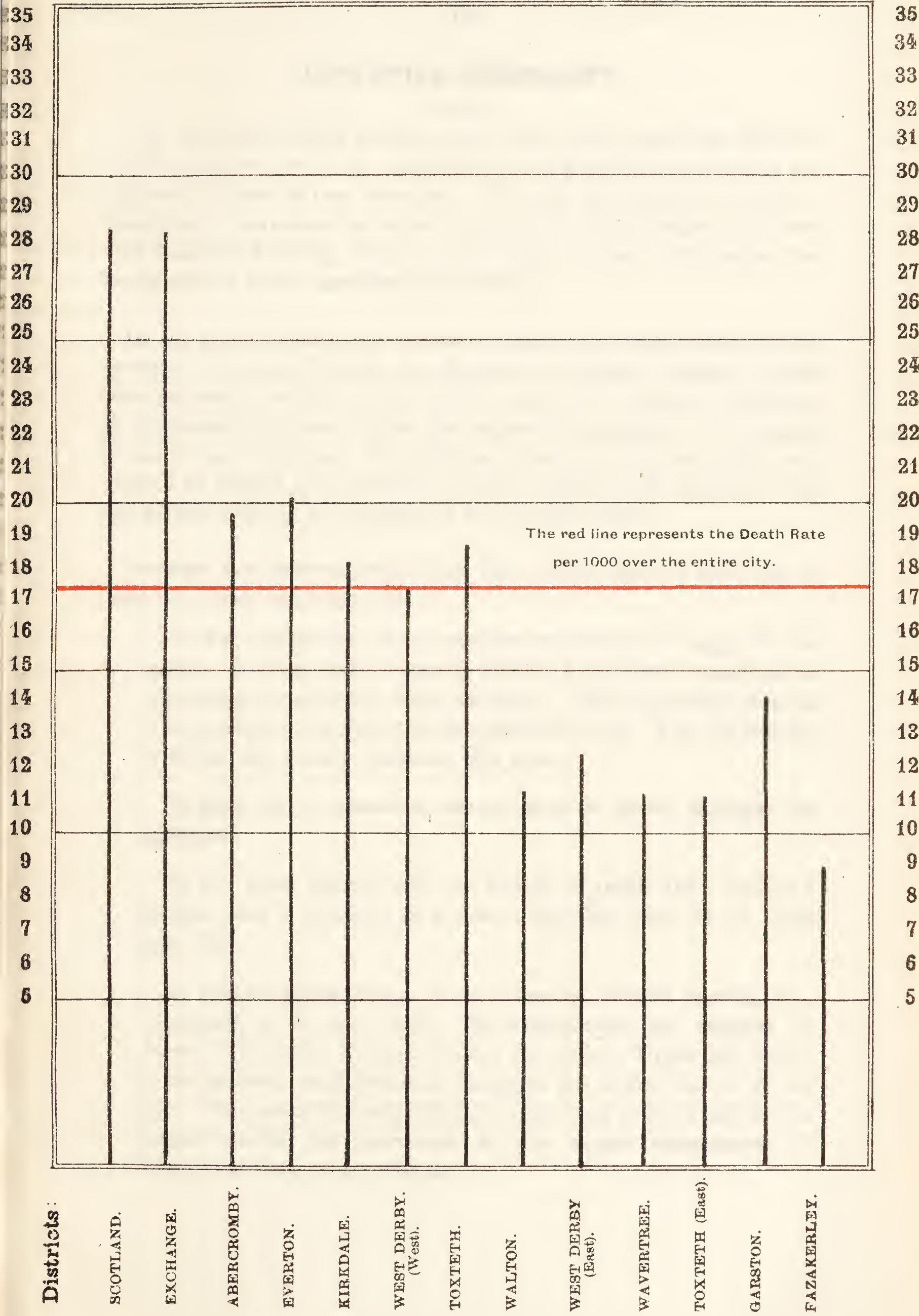
* City area extended. ** Garston included. *** Fazakerley included.

NOTE.—The rates have been calculated upon the corrected population as ascertained by the Census Returns of 1891, 1901, and 1911.

CITY OF LIVERPOOL.

Comparative view of the Death Rate per 1000 in the different districts of the City during the year 1912.

O.16588.1500.5/13(34769)697 U.



1911



Alabama Arkansas California Colorado Connecticut Delaware Florida Georgia Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Missouri Montana Nebraska Nevada New Hampshire New Jersey New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina South Dakota Tennessee Texas Utah Vermont Virginia Washington West Virginia Wisconsin Wyoming District of Columbia

INFANTILE MORTALITY.

This important subject has been fully dealt with in previous Reports, and the observations as to the influences of domestic surroundings are applicable to-day as they were then. The last few years have shown a conspicuous diminution in infant mortality, and this decline has been well maintained during 1912, the rate being 125 per 1,000 births, the lowest rate of infant mortality yet recorded.

In the poorer districts it is plain to the most casual observer that necessary care and attention are not given to infants; nothing is more common than to see the infant handed over to the custody of children or irresponsible persons, whilst the responsible guardians are engaged in some other occupation. The children of the very poor are in this way exposed to neglect and inattention which, together with improper food and scanty clothing, are reflected in the sacrifice of life.

Amongst the agencies which have been relied upon in this city to lessen the infant mortality are:—

(1) The instruction of the mothers or persons in charge of the infant. A large staff of trained Female Inspectors is employed to visit and give instruction where necessary. Many thousands of cards of instruction are distributed throughout the city. The Notification of Births Act greatly facilitates this work.

(2) Help of a somewhat similar kind is given through the midwives.

(3) For those mothers who are unable to suckle their infants a suitable food is provided at a price within the reach of all. (See page 193).

(4) Private philanthropy, by day-nurseries, district nursing, &c., co-operates in the good work. The day-nurseries are situated in Juvenal Street and Everton Road in the central, Upper Hill Street in the southern, and Beaumont Street in the eastern district of the city. These establishments afford for girls about to leave school most valuable fields for instruction in the proper management of infants and very young children.

(5) Hospital accommodation for some of the infants suffering from measles and whooping cough, which benefits not only the sufferer, but removes the source of infection.

(6) Greater municipal cleanliness; improvements in scavenging and cleansing, and the removal of all refuse likely to breed or harbour flies; the substitution of appropriate ashbins for large and foul ashpits; the provision of an unrestricted water supply, and its freer use in municipal sanitation.

(7) The removal of insanitary areas, and the erection of wholesome dwellings in their place.

So far as infantile diarrhœa is concerned, it must never be forgotten, however, that whatever is in the power of the municipality to do in regard to the preservation of infant life is insignificant when compared with what is in the power of the mother to do. If the mother will suckle the infant, its risks are slight. If she will not do so, the Corporation proves but a poor foster-mother, owing to the absolute impossibility of fulfilling the duties which only the mother herself can discharge.

Infant mortality varies widely, not only in different towns, but in the various wards or districts of the same towns. Poverty or riches, sanitary or insanitary conditions, occupation or the want of it, high birth rate or low, all play their part in bringing these variations about. But every extended inquiry into the intricate subject of infant mortality brings to light the fact that parents living approximately under the same social and sanitary conditions have such varying success in rearing their infants that the personal factor requires a careful study.

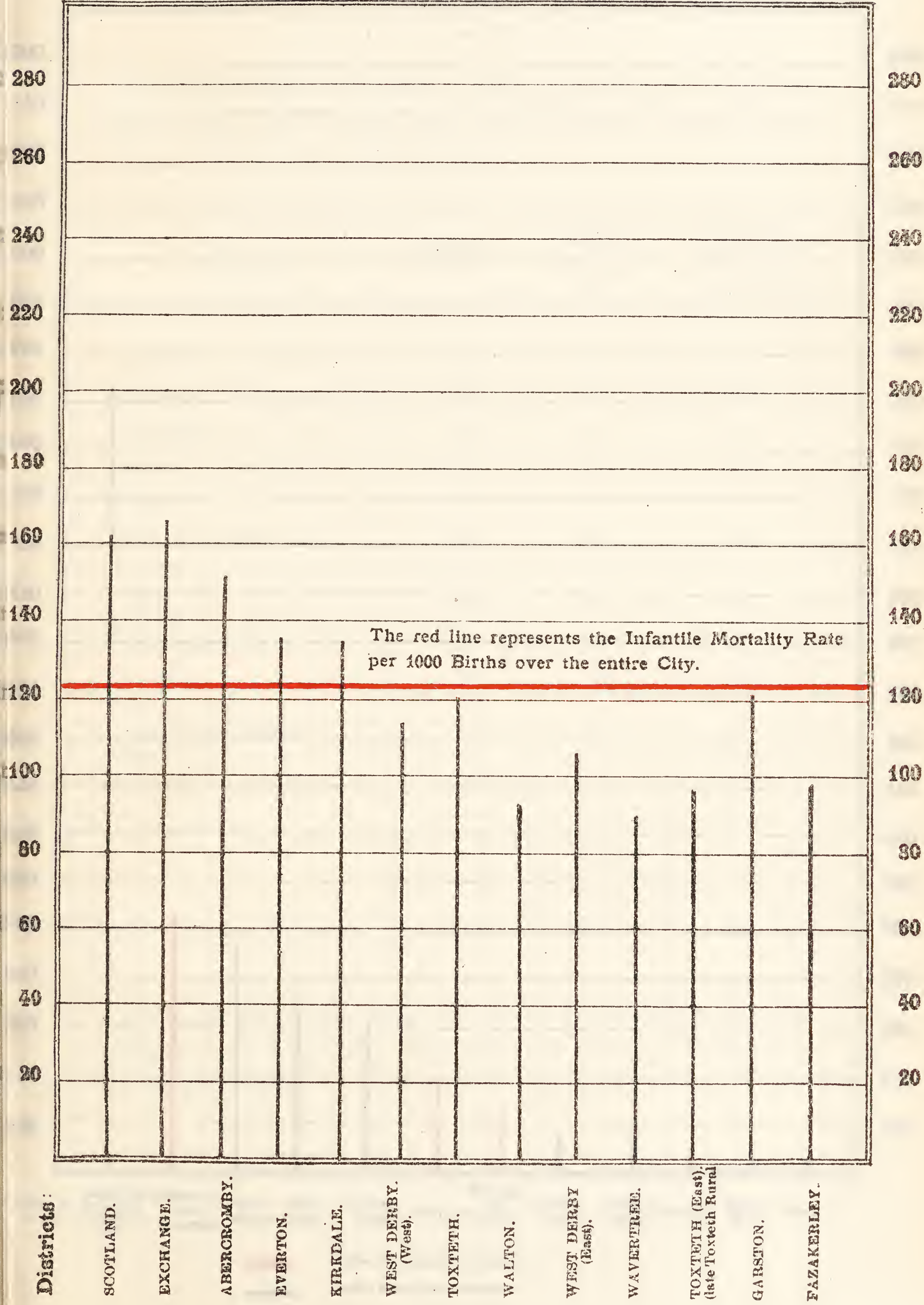
The highest infant mortality is always reached in the summer and early autumn, the cause of death being ascribed to diarrhœa. The subject has been carefully investigated bacteriologically, but no organism so far has been identified solely as the cause. The contents of some of the foul feeding bottles have been subjected to analysis, with results showing that this liquid was of an extremely dangerous character, and certain samples have proved so highly virulent as to kill the animal inoculated with it within 48 hours.

The Medical Officer has for many years pointed out that milk, as nature intended it to be given to infants, is never once exposed to the air, that it passes directly at the time of the manufacture in the gland to the stomach; its composition, temperature and mixture, adapt it to the needs of the offspring; it has neither abstractions, adulterations, preservatives nor uncleanness; it is, moreover, bacteriologically clean and pure. Nothing the municipality can do can equal this.

CITY OF LIVERPOOL.

Comparative view of the Infantile Mortality per 1000 Births in the different districts of the City during the year 1912.

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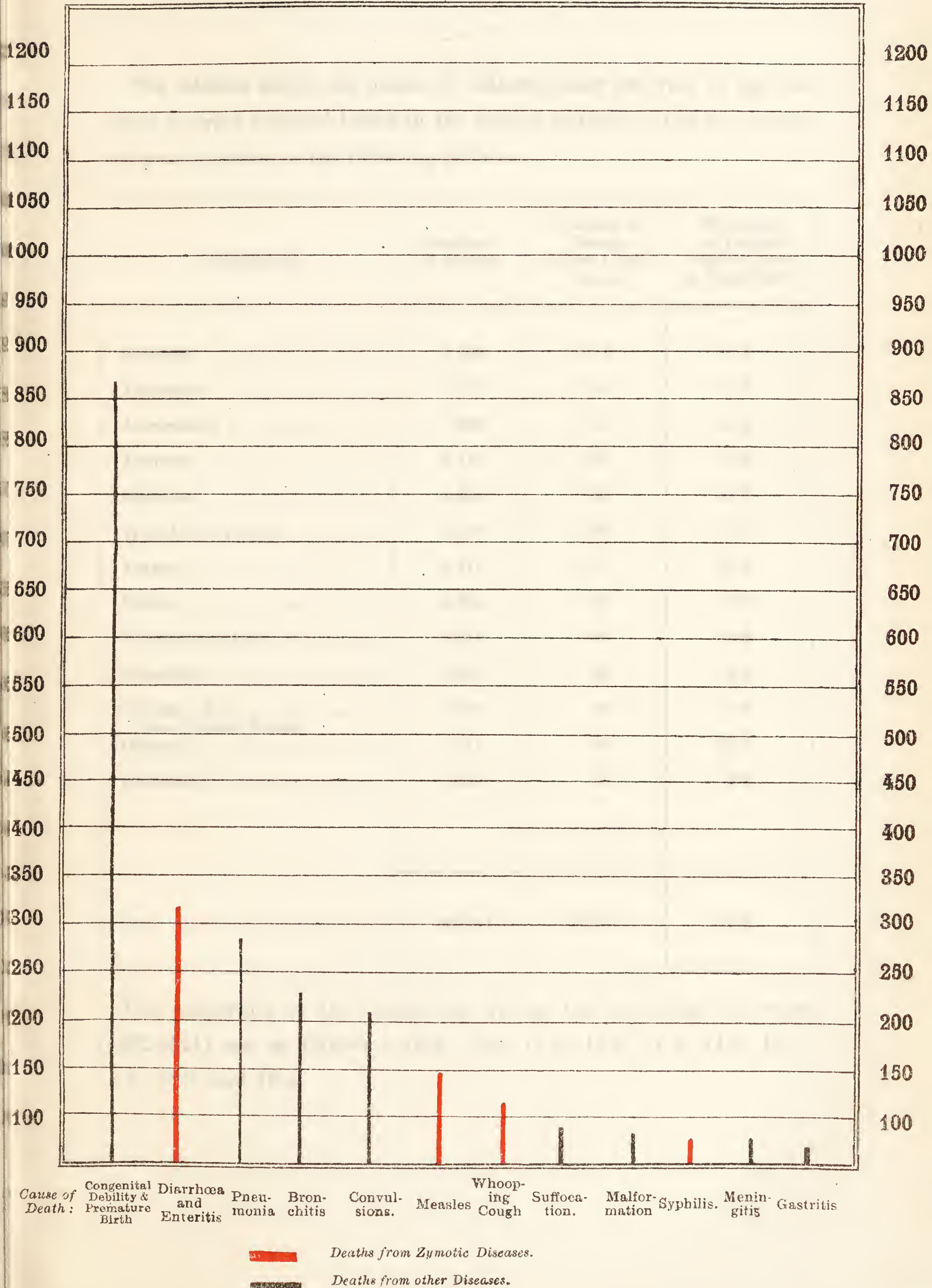
Sedimentation

THE UNIVERSITY OF CHICAGO

CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of Infantile Mortality
(below 1 year of age) during the year 1912.

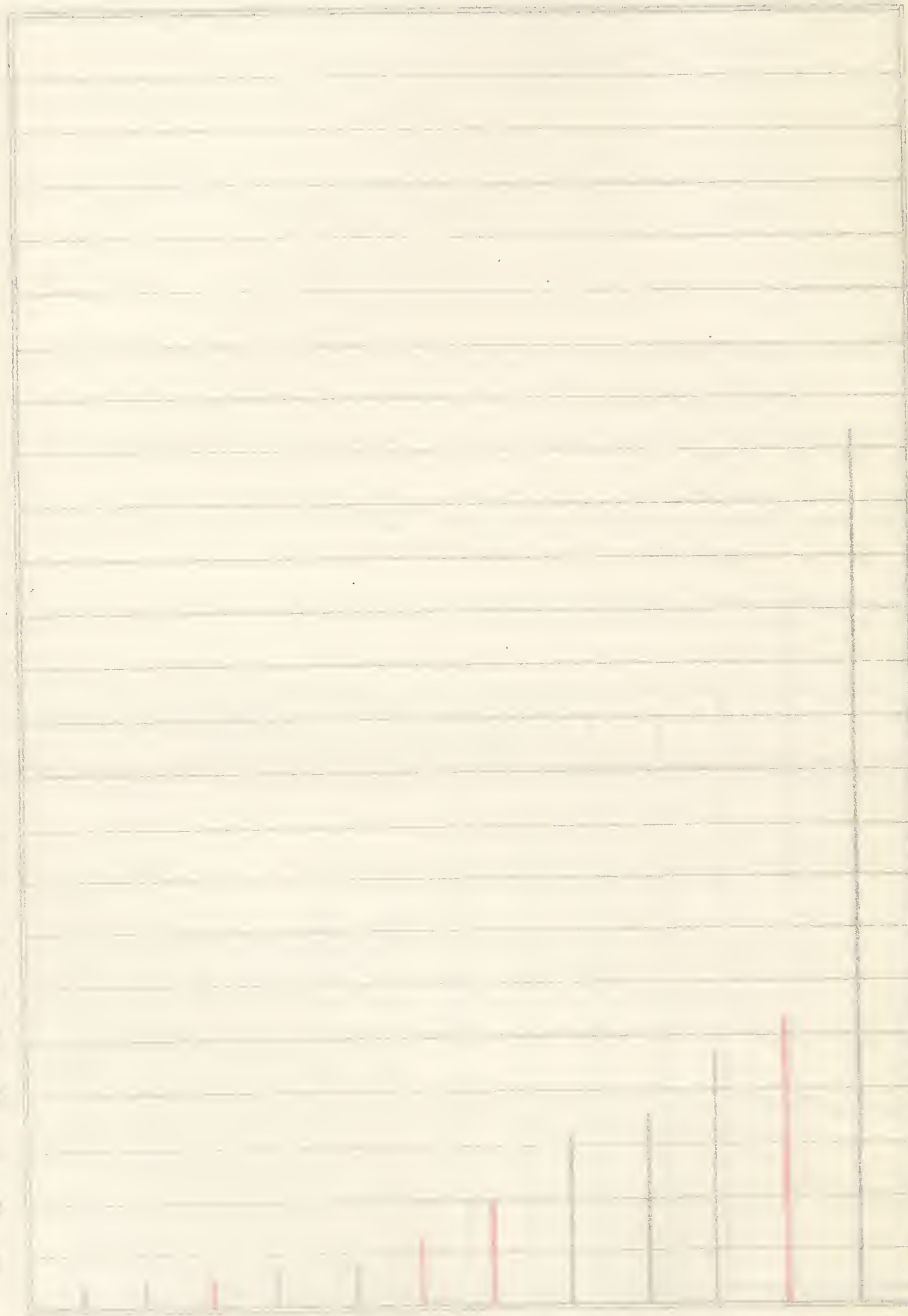
O.16588.1500.5/13(84771)697 W



Comparative view of twelve of the principal causes of Infantile Mortality
(below 1 year of age) during the year 1912

CLASSIFIED BY THE

1200
1100
1000
900
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700
600
500
400
300
200
150
100
50
0



1. Convulsions 2. Diarrhoea 3. Stomach & Bowel Disorders 4. Febrile Disorders 5. Respiratory Disorders 6. Infectious Diseases 7. Cerebral Disorders 8. Heart Disorders 9. Lung Disorders 10. Liver Disorders 11. Kidney Disorders 12. Other

Red Bar = Infantile Mortality
Black Bar = Total Mortality

The relation which the deaths of infants under one year of age has borne to every hundred births in the various districts of the city during the year is shown in the following table:—

DISTRICTS.	Number of Births.	Number of Deaths under 1 year of age.	Percentage of Deaths under 1 year to total Births.
Scotland	1,938	312	16·1
Exchange	1,199	200	16·7
Abercromby	926	141	15·2
Everton	4,110	561	13·6
Kirkdale	2,161	286	13·2
West Derby (West)	2,599	295	11·3
Toxteth	3,114	377	12·1
Walton	2,084	189	9·0
West Derby (East)	1,574	166	10·5
Wavertree	1,107	98	8·8
Toxteth—East	588	55	9·3
(late Toxteth Rural)			
Garston	731	88	12·3
Fazakerley	102	10	9·8
City	22,233	2,778	12·5

The proportion in the whole city during the preceding ten years (1902-1911) was as follows:—16·2, 15·9, 19·6, 15·4, 17·1, 14·3, 14·0, 14·3, 13·9, and 15·4.

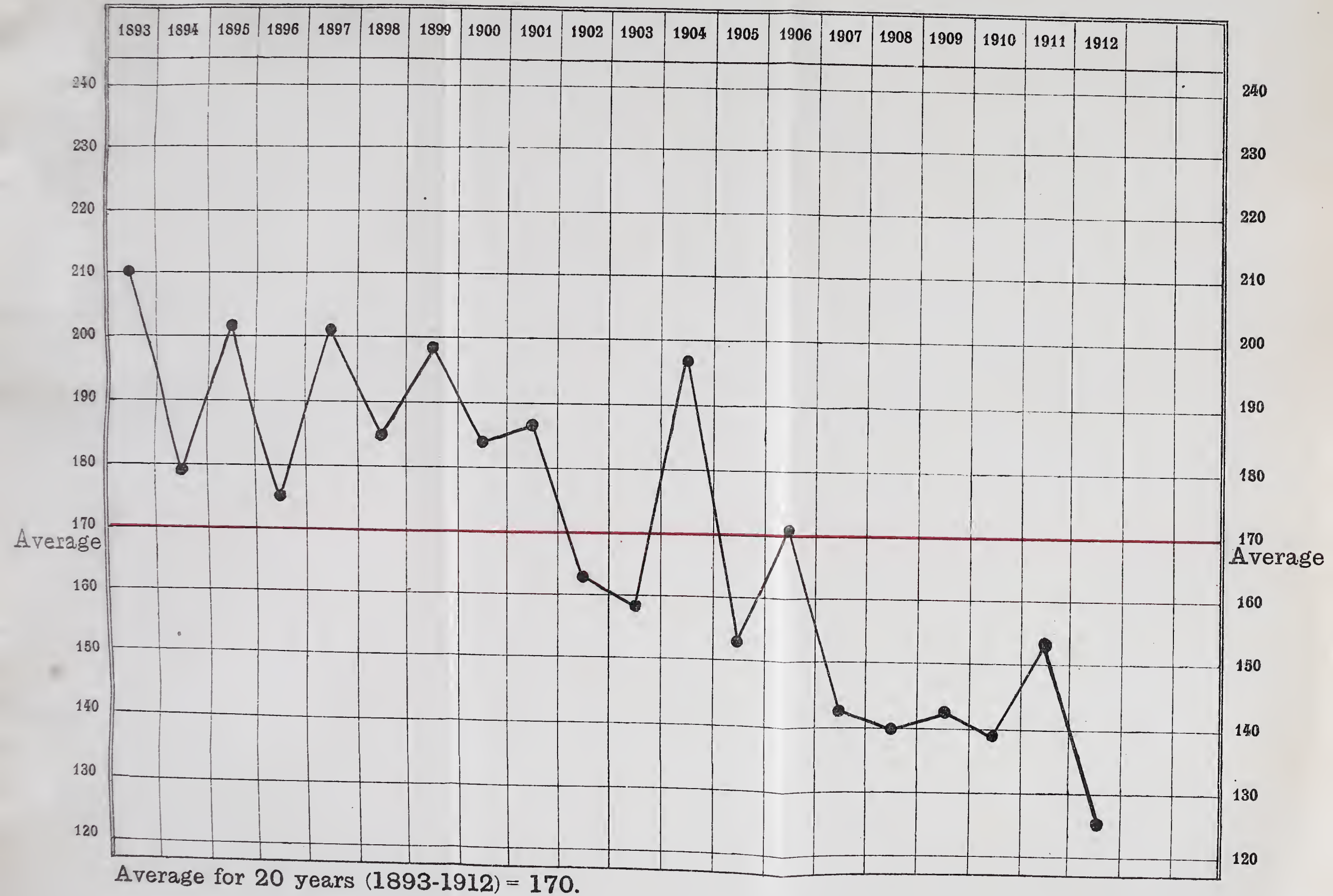
The following table shows the number of deaths of Infants below one year of age and the rate per 1,000 births during the last twenty years :—

Year.				No. of Deaths below One Year of Age.	Rate per 1,000 Births.
1893	...	...	...	3,863	210
1894	...	...	...	3,210	179
1895	...	...	...	4,441	202
1896	...	...	...	3,833	175
1897	...	...	...	4,488	201
1898	...	...	...	4,111	184
1899	...	...	...	4,481	199
1900	...	...	...	4,203	186
1901	...	...	...	4,089	187
1902	...	...	...	3,899	162
1903	...	...	...	3,775	159
1904	...	...	...	4,735	196
1905	...	...	...	3,710	154
1906	...	...	...	4,137	171
1907	...	...	...	3,383	143
1908	...	...	...	3,355	140
1909	...	...	...	3,377	143
1910	...	...	...	3,216	139
1911	...	...	...	3,466	154
1912	2,778	125

CITY OF LIVERPOOL.

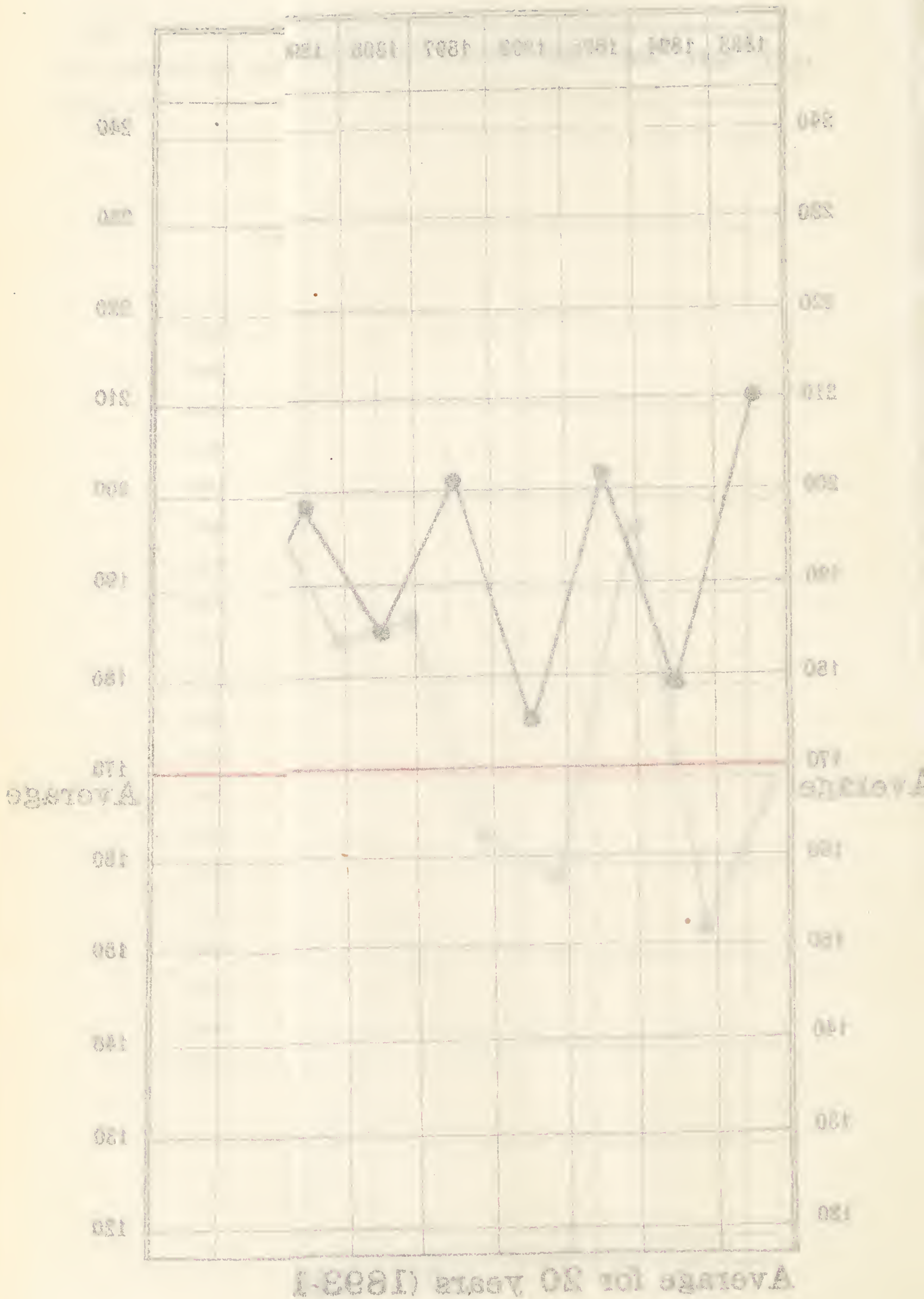
Infant Mortality per 1000 Births 1893-1912.

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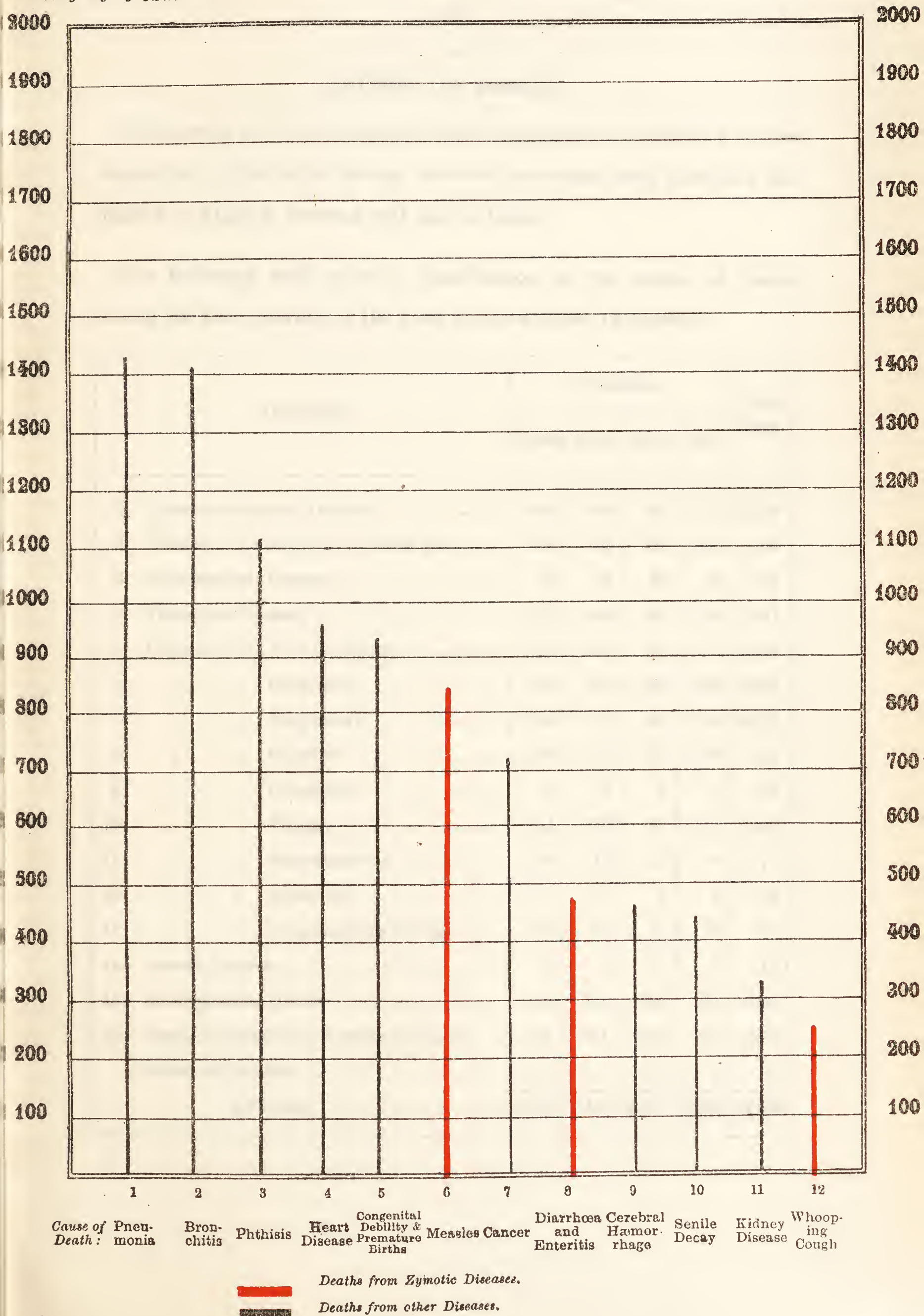
1893-1900



CITY OF LIVERPOOL.

Comparative view of twelve of the principal causes of Death during the year 1912.

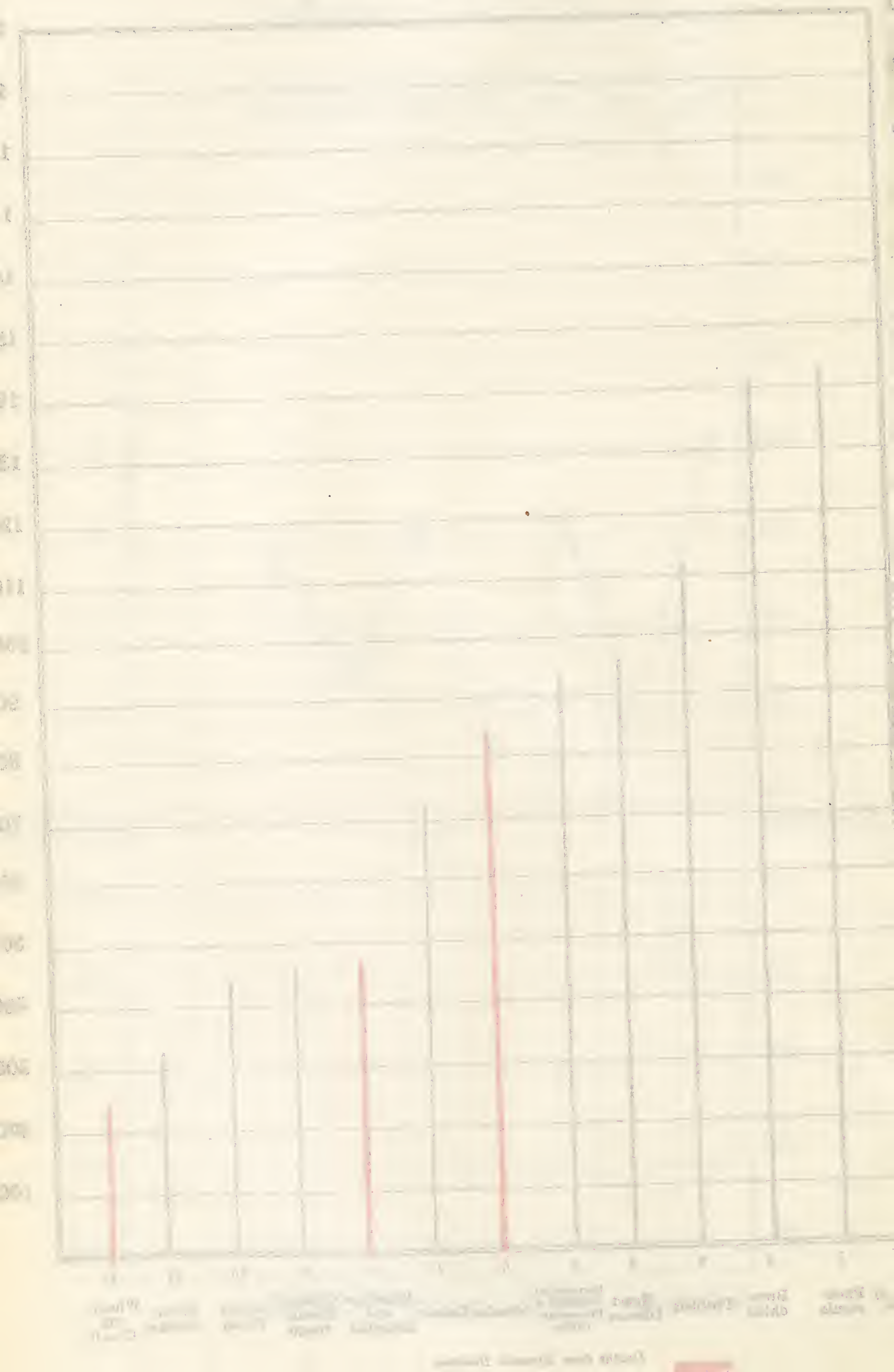
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CITY OF LIVERPOOL

Comparative view of twelve of the principal streets of
 Liverpool during the year 1912.

Scale of Feet



CAUSES OF DEATH.

Full details as to the causes of death are set forth in Table *E* in the Appendix; in this table the age at which each death took place and the district in which it occurred will also be found.

The following table gives a classification of the causes of death during the four quarters of the year, grouped under 16 classes:—

CLASSES.	QUARTERS.				YEAR 1912.
	March	June.	Sept.	Dec.	
1. Zymotic and Septic Diseases	288	562	638	617	2,105
2. Diseases of Uncertain or Variable Seat.....	185	186	222	207	800
3. Constitutional Diseases.....	39	48	62	49	198
4. Tubercular Diseases	437	388	316	376	1,517
5. Diseases of the Nervous System	317	289	309	274	1,189
6. „ „ Circulatory „	347	350	282	360	1,339
7. „ „ Respiratory „	1046	705	482	845	3,078
8. „ „ Digestive „	148	151	124	188	611
9. „ „ Lymphatic „	9	6	5	6	26
10. „ „ Urinary „	114	106	86	104	410
11. „ „ Reproductive „	25	16	13	19	73
12. „ „ Joints, &c.	4	6	8	5	23
13. „ „ Integumentary System	12	10	13	12	47
14. Dietetic Diseases.....	2	2	4	7	15
15. Developmental Diseases	449	378	336	385	1,548
16. Causes investigated at Coroner's Inquests ...	278	241	227	274	1,020
Causes not specified	2	...	1	1	4
All Causes	3,702	3,444	3,128	3,729	14,003

ZYMOTIC DISEASES.

This class of disease is one calling for special attention, and is dealt with in some detail in the following tables, the first of which shows the localities and the periods of the fatal prevalence of zymotic diseases, and the subsequent tables deal specifically with each form of zymotic disease during 1912:—

DISTRICTS.	Deaths from all causes.	ZYMOTICS.				
		Quarters.				Per- centage of Zymotic Deaths to Deaths from all causes.
		March.	June.	Sept.	Dec.	
Scotland.....	1,335	19	119	119	29	21·4
Exchange	1,075	22	53	50	37	15·0
Abercromby	876	13	22	36	40	12·6
Everton	2,466	51	148	142	90	17·4
Kirkdale	1,232	22	61	64	35	14·7
West Derby (West).....	1,486	28	45	72	85	15·4
Toxteth	1,909	40	36	62	184	22·1
Walton	886	31	24	25	20	11·3
West Derby (East)	818	15	19	16	27	9·4
Wavertree	478	20	14	8	33	15·7
Toxteth (East)	395	9	4	5	6	6·0
(late Toxteth Rural)						
Garston	354	8	8	20	16	14·6
Fazakerley	54	2	—	1	1	7·4
Workhouses and Hospitals (Residences outside City)	639	8	9	18	14	7·6
City	14,002	288	562	638	617	15·0

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

Zymotic diseases were the cause of 2,105 deaths during the year 1912 and accounted for 15·0 per cent. of the total mortality within the city during this period. The death-rate from zymotic diseases per 1,000 was 2·7. The average rate for the preceding five years (1907-11) was also 2·7. The deaths during 1912 were as follows:—

	QUARTERS.				YEAR 1912.
	March.	June.	Sept.	Dec.	
Total Zymotics	288	562	638	617	2,105
Smallpox .....	...	1	...	...	1
Measles	47	266	249	315	877
Scarlet Fever.....	24	24	20	19	87
Diphtheria	39	27	14	28	108
Membranous Croup	2	...	...	1	3
Whooping-cough	53	98	77	44	272
Diarrhœa	64	89	214	142	509
Influenza	12	18	6	14	50
Fever {	Typhus .....	...	2	...	2
	Typhoid	4	5	9	23
Other Zymotics.....	43	34	51	45	173

NOTE.—Influenza, Measles, and Whooping-cough appear to have been predisposing causes in the case of many deaths primarily ascribed to Respiratory Disease (page 31) inasmuch as one or other of these Zymotics had preceded the fatal illness. See also notes to succeeding tables.

PLAGUE.

On April 29th a case of plague was reported on board the s.s. "Italian Prince," which vessel had arrived at Liverpool from Mediterranean ports. The patient was a youth aged 16 years, who was an apprentice on board. He was admitted to the Royal Southern Hospital on April 27th, and died before he could be transferred to the Port Sanitary Hospital. A number of rats were caught on board the ship, and one was found to be plague-infected.

On 25th July a young lad was admitted as a patient into the Royal Infirmary. He was operated on, and a gland removed.

Plague being suspected, he was removed to a City Isolation Hospital on the 26th July, and the other members of his family were also taken on the same day for isolation.

The Local Government Board were duly informed of all the circumstances, and in conformity with the International Agreement the Consular body at once received an intimation to the effect that a case suspicious of plague was under observation in hospital.

The dwelling-house occupied by the family, which was fairly clean, was dealt with in the usual manner.

Three rats were inoculated with material taken from the gland, and all three died from plague. One of the dead rats was forwarded to the Local Government Board, and the diagnosis of plague was confirmed.

On further investigation the infection appeared to have been derived from bales of cotton imported from Egypt. A brother of the patient, aged 14 years, died on June 30th from an illness which was stated in the death certificate to have been pneumonia. This boy was engaged in sampling these goods in a warehouse, and subsequently, as the result of the closest observation in this warehouse, a plague-infected rat was found on August 1st, and another rat was found in an adjoining warehouse on August 30th.

The presumption is that the cotton contained infected rats or rat fleas, and the infection was transferred to the rats in the warehouse, and that the boy carried infection to his home.

In both cases enquiry failed to reveal any extension of the disease, either amongst men or rats, and the incidents were therefore closed, but it is interesting to recall that three cases of plague have been admitted into Liverpool hospitals in which the similarity of the local conditions to appendicitis or hernia, obscured the real nature of the case, and an operation was performed with a view to relieve what was thought to be the cause of the illness.

It is equally important to notice that in the preceding outbreaks the extension of the disease has been extremely limited, from which it may be a fair inference that sanitary administration will be equally effective in the future; these limitations must not obscure the necessity for extreme precautionary measures.

A continual system of rat-catching has been pursued, both in the City and the Port, for many years. During the year 1912, 5,500 rats have been caught, and over 3,000 were sent to the City Bacteriologist for examination in connection with plague infection.

SMALLPOX.

Smallpox was introduced into the City on three separate occasions during the year. The disease occurs in the City and Port every year owing to its unique position as the chief emigration port of the country, and when cases occur their suppression requires a very great amount of sanitary supervision and vigilance.

Together with the removal of the patients to hospital, isolation and re-vaccination of those who had been exposed to infection, disinfection of the infected clothing, houses, &c., were all carried out, and daily visits were made for fourteen days to infected houses to inquire if any sickness of any kind had arisen.

Including the imported cases, there was a total number of four notified, one of whom died on board ship before removal.

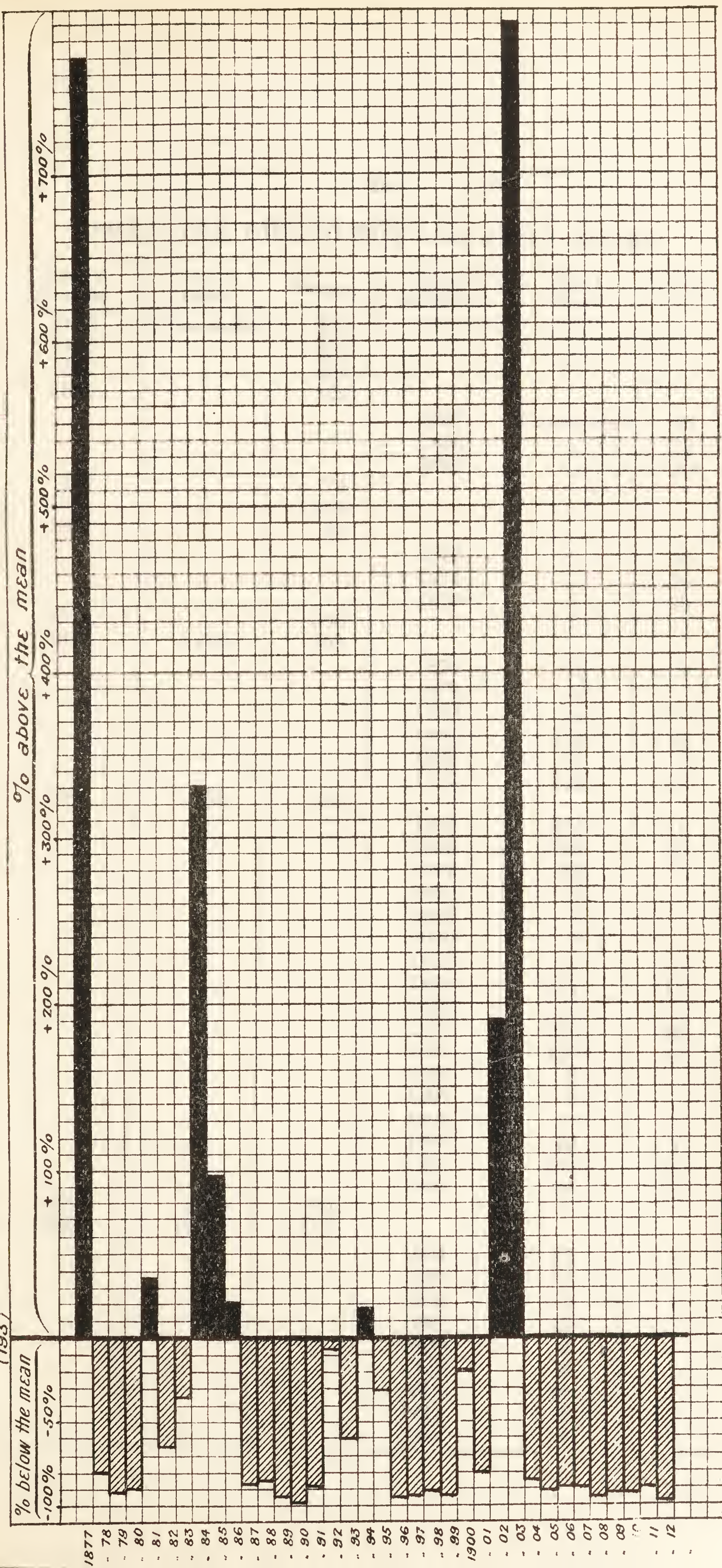
The accompanying chart and table are of interest as showing the greater intervals which are occurring in any considerable prevalence of small-pox.

The medical inspection of school children has brought to light valuable information as to the efficiency of vaccination in different localities, and it is disquieting to observe that in some districts there appears to be a growing neglect of vaccination, as evidenced by the fact that the younger children show a less satisfactory vaccination than the older ones.

It appears that over the whole City the percentage of unvaccinated boys and girls leaving school is 6·8, but in the new admissions of children to the schools it is 8·1 per cent., an addition which cannot be regarded without grave apprehension as to the results of exposure to small-pox. In one Poor-law district nearly 13 per cent. of the newly admitted children are unvaccinated—a discreditable state of affairs.

CHART SHOWING EPIDEMIC PERIODS OF SMALLPOX IN LIVERPOOL.

Mean cases notified in 36 years (193) Shown in percentages of cases above & below the mean (193 cases) for a period of 36 years.



The Black Columns indicate years of epidemic prevalence, shown as percentages of cases above the mean.
The years of subsidence are indicated by Shaded Columns in percentages of cases below the mean.

SMALL-POX DURING THE LAST FIFTY YEARS.

Years of Increase.	No. of Cases.	Deaths.	Years of Subsidence.	No. of Cases.	Deaths.
1863	Unrecorded	100			
1864	"	482			
1865	"	459			
1866	"	102			
			1867	Unrecorded	22
			1868	"	18
			1869	"	20
1870	"	174			
1871	"	1,919			
1872	"	50			
			1873	"	10
			1874	"	30
			1875	"	29
1876	"	386			
1877	1,660	299			
			1878	35	3
			1879	12	...
			1880	14	2
			1881	262	34
			1882	67	6
			1883	126	26
1884	832	106			
			1885	375	46
			1886	234	29
			1887	23	1
			1888	27	1
			1889	9	1
			1890	2	...
			1891	21	2
			1892	177	13
			1893	75	9
			1894	229	20
			1895	130	12
			1896	8	...
			1897	6	...
			1898	17	2
			1899	10	1
			1900	156	23
			1901	37	6
1902	560	20			
1903	1720	141			
			1904	27	2
			1905	15	...
			1906	19	1
			1907	19	...
			1908	7	...
			1909	9	...
			1910	10	...
			1911	19	...
			1912	4	1

TYPHUS FEVER.

Of recent years cases of this disease have been imported by trans-migrants, en route to America or Canada. It is particularly liable to spread amongst dirty, ill-fed, and intemperate persons, and incessant watchfulness is necessary in order to hold it in check. The disease almost always attacks the children of the family first; in them the symptoms are obscure, and are often unrecognised until adults succumb.

The total number of cases reported was 6 (the lowest number ever recorded in any year), against 26 in the preceding year; the average number of the last five years being 16. Two cases died during the year.

Of the six cases of typhus fever notified during the year, two occurred in April, one in July, two in August, and one in September. One case was that of a Russian emigrant, one of a party of seventy-five proceeding to the United States, who came from Libau via London, and was lodged in a boarding house in the City. He was there found to be unwell, and was removed to Brownlow Hill Workhouse, where his illness was diagnosed. He was promptly transferred from that Institution to the City Hospital North. Another case was that of one of the nurses who attended this Russian emigrant. Both patients recovered. There were two other cases, one of a woman, aged 41 years, living in a neighbourhood frequented by emigrants, and the other, also a woman, aged 42 years, living in Burlington Street, the source of whose infection could not be traced. Both recovered. The remaining two cases of illness were obscure in their nature, although the evidence suggested that they were probably typhus. Both of these cases ended fatally.

Reports for preceding years sufficiently illustrate the importance of the daily visits which are made to houses which have been infected with typhus fever, as well as the importance of keeping under supervision every person who is known to have been in contact with the patient. None of the stringent measures which have been adopted against typhus are in any way relaxed.

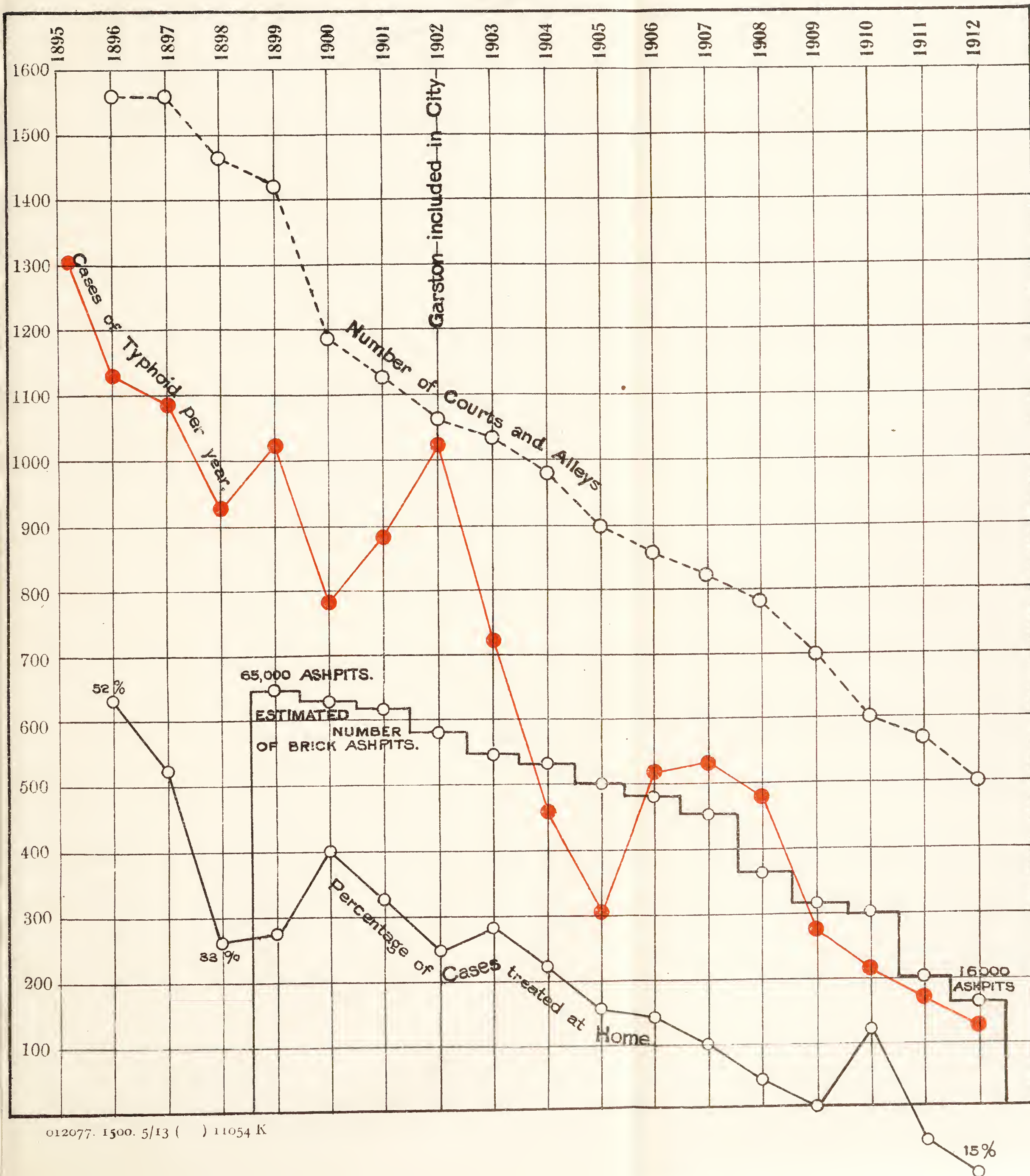
The number of deaths during each of the preceding ten years has been as follows:—

1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.
25	57	25	28	8	18	10	8	—	5

CITY OF LIVERPOOL.

SHOWING THE RELATION BETWEEN VARIOUS SANITARY MEASURES AND THE DECLINE OF TYPHOID DURING THE YEARS

1896 to 1912



SHOWING THE RELATION OF THE VARIOUS CANTONMENT AREAS

1890 to 1915



TYPHOID FEVER.

There were 124 cases of Typhoid Fever reported during the year, the number being lower than in any preceding year. There were 1,026 in 1902, 681 in 1903, 434 in 1904, 324 in 1905, 491 in 1906, 482 in 1907, 447 in 1908, 278 in 1909, 231 in 1910, and 184 in 1911. The deaths numbered twenty-three, of whom two were persons resident outside the City. This is a reduction of thirteen upon the figure for 1911, and is the lowest figure recorded. Of the twenty-one fatal cases amongst residents, seven were infected whilst resident outside the City. The proportion of cases removed to hospital was 85 per cent. (see page 282).

The causes of the great decline which is exhibited in the above figures are principally the greater facilities for isolation of the sick, and the improved housing of the poor, with which are associated improvements in the disposal of excrement; but the abundant supply of pure water, the care exercised over the supply of milk and other foodstuffs, and the early removal of fly-breeding refuse, have also played their part in reducing the incidence of the disease.

The probable causation of the reported cases has again been closely examined, and the results of the investigation are shown in the subjoined table, those for the year 1911 being also shown for comparison. It will be seen that the number of imported cases—mainly sea-borne—has slightly increased, and that, together with those attributable to the consumption of infected shellfish—mainly mussels from Ireland—they constitute 45 per cent. of all cases. It will be seen that after subtracting the 72 cases of which the probable causation was ascertained, there remain 52 cases in which the source of infection was not traced. These were distributed according to whether they occurred in a central area containing almost all such insanitary property as now remains, or in an outer area which includes the rest of the City, and the population of which is approximately four times that of the central area; twenty occurred in the central, and thirty-two in the outer area. The rate of incidence of these cases upon the central is still more than twice that

upon the outer area, but there is a marked reduction compared with the previous year. This may again be associated with the destruction of insanitary property in the central area.

One case occurred in which the source of infection was traced to a “chronic carrier,” who, although she had never had any disease recognisable as Typhoid Fever, was found by Dr. Stallybrass to be excreting large numbers of Typhoid Bacilli. This was the fourth member of her family who had developed the disease in ten years, of whom two had died. In all probability they had been infected by her.

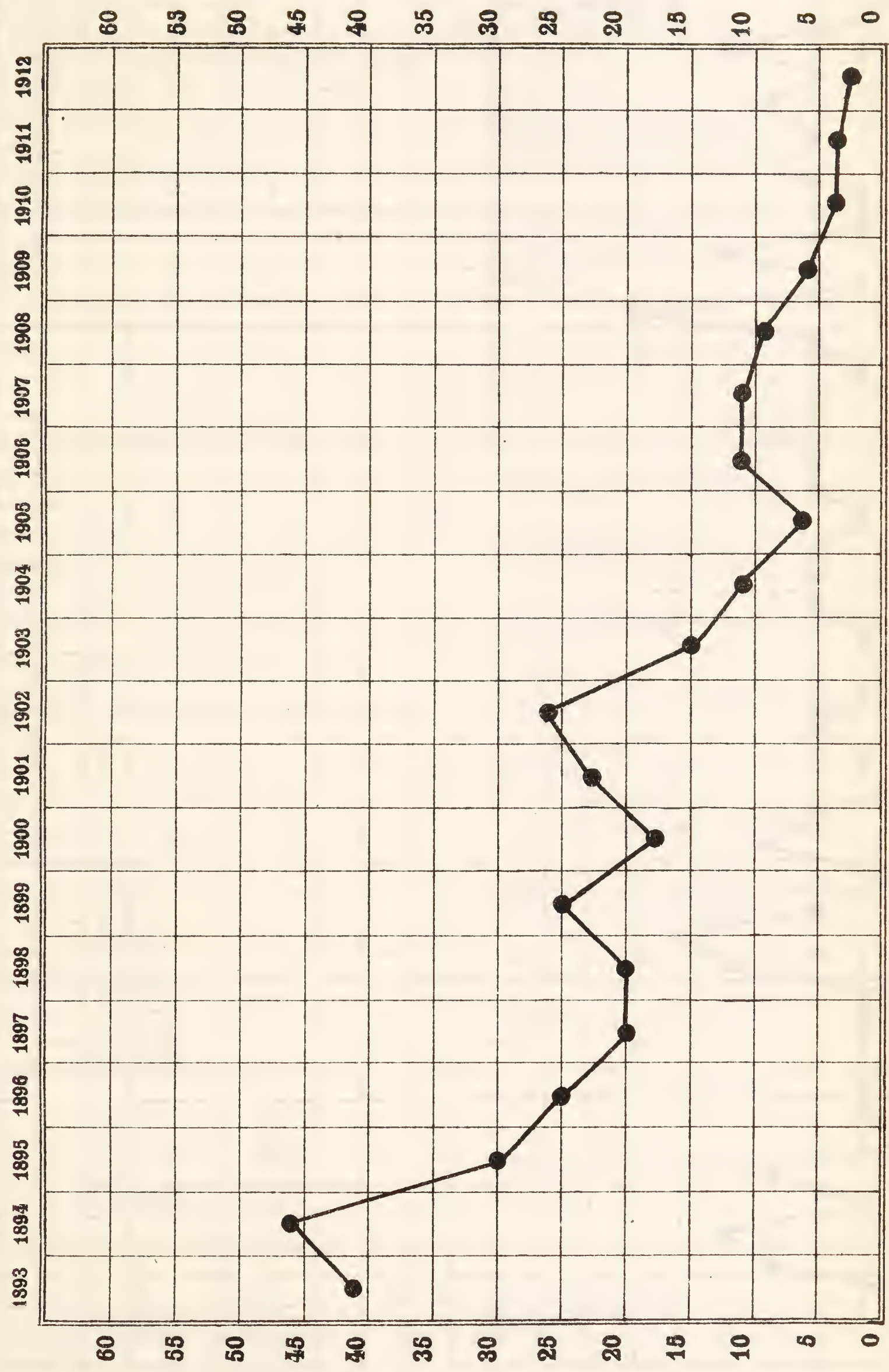
The accompanying chart indicates, month by month, the causation of the different cases. No cases were recorded in January; the smallest number of cases that had previously been recorded in any one month was eight. The considerable increase in indigenous cases that used to occur in the Autumn months failed to appear in 1912, and it is to be hoped that it is now entirely a feature of the past. The cases attributable to the consumption of shellfish occurred mainly in October, November, and December.

CASES OF TYPHOID ARRANGED BY CAUSATION.

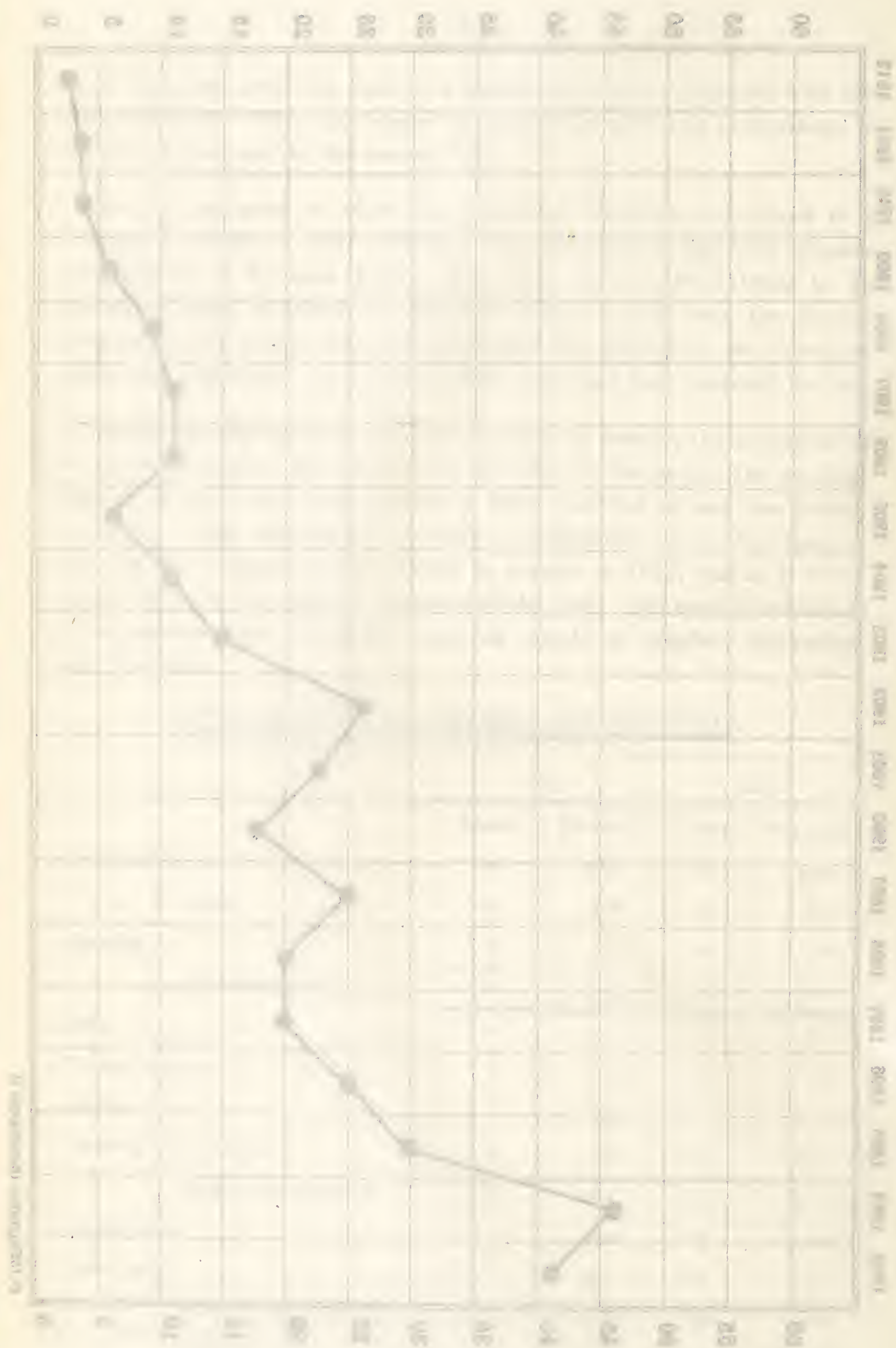
	1912.		1911.	
	Cases.	Per cent.	Cases.	Per cent.
Imported by Sea	36	29·6	31	16·9
,, ,, Land	11	8·8	9	4·9
Shellfish	9	7·2	12	6·0
(Total imported)	56	45·6	52	27·8
Milk	—	—	3	1·6
Direct Infection	9	7·2	13	7·2
Carrier	1	0·8	—	—
Probably not Typhoid	6	4·8	19	10·5
(Total accounted for)	72	58·4	87	47·5
Central Area	20	16·0	51	28·2
Outer Area... ..	32	24·3	45	24·3
(Total Unaccounted for)... ..	52	41·6	96	52·5
Total for City	124	100·0	183	100·0

CITY OF LIVERPOOL.

Death Rate per 100,000 of Resident Population
from Typhoid Fever, 1893-1912.



STUDY - EARTH VIBRATION RECORD

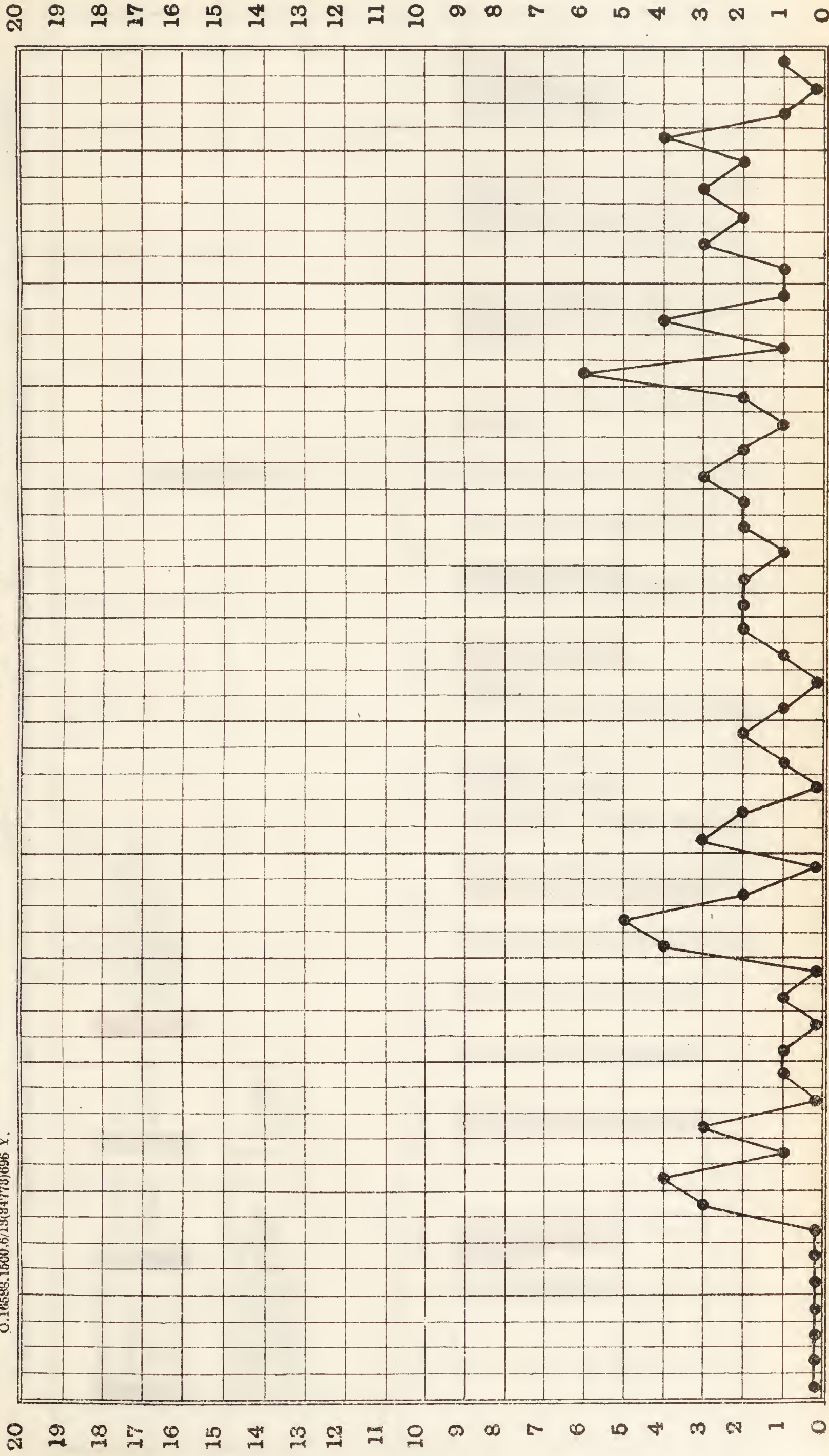


CITY OF LIVERPOOL.

Cases of Typhoid Fever reported during each week of 1912.

O.16588.1500.6/19(34773)696 Y.

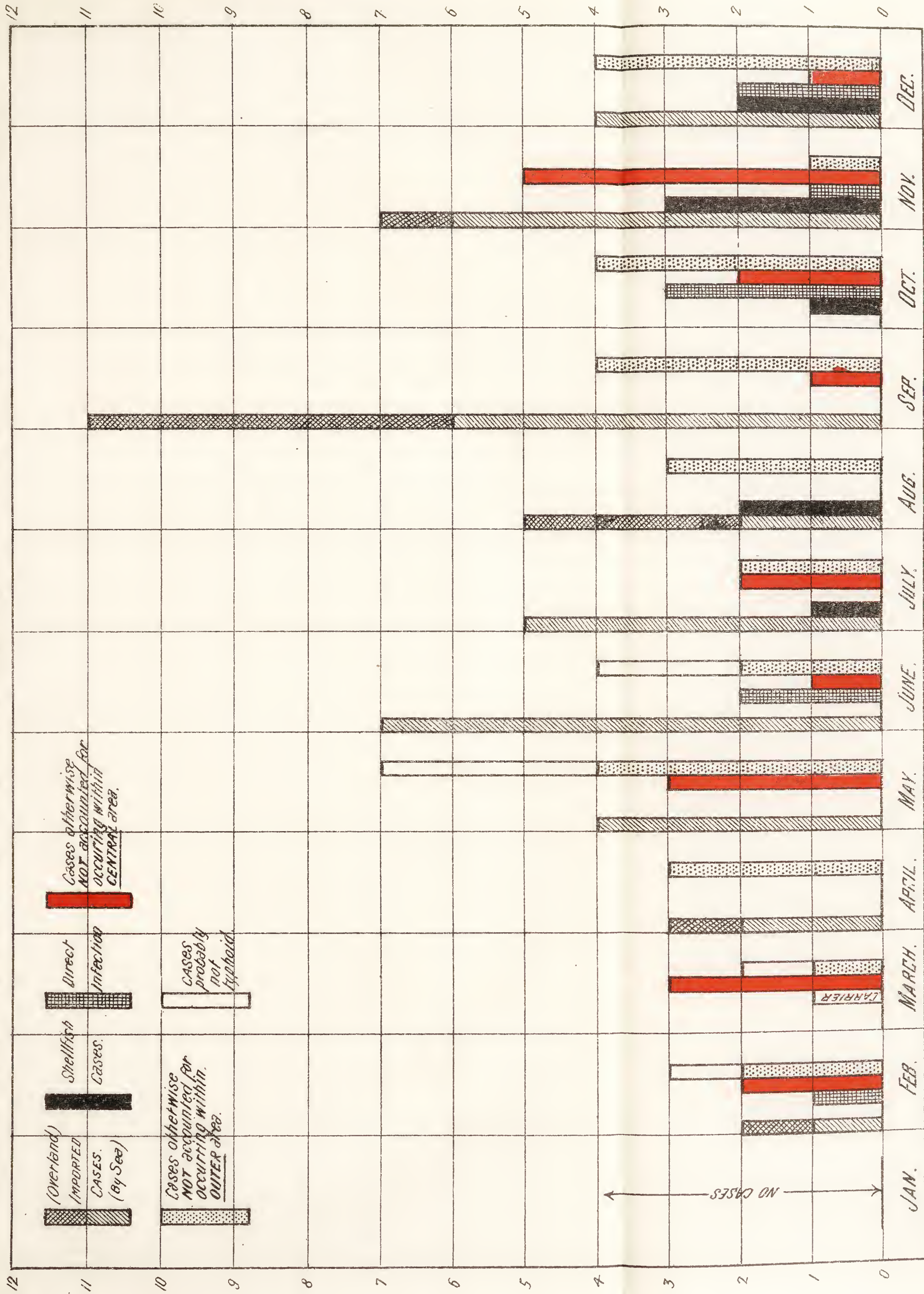
Cases





CITY OF LIVERPOOL

Cases of Typhoid Fever occurring during 1912. arranged by months and according to probable causation.



DEATHS FROM TYPHOID FEVER.

The following table shows the periods of the year and the localities in which deaths from typhoid fever occurred, and also the ages at death.

DISTRICTS.	QUARTERS.								YEAR.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland
Exchange	1	...	...	1	..	1	1	2
Abercromby	1	...	1	...	...	...	1	...	3	3
Everton	1	1	...	1	...	2	1	3
Kirkdale	1	...	...	3	1	3	4
West Derby (West)	1	...	1	...	...	...	2	2
Toxteth	1	1	...	1	...	...	...	2	1	3
Walton	1	...	...	...	1	1
West Derby (East).....	2	...	...	...	...	...	...	...	2	...	2
Wavertree	1	...	1	...	1
Toxteth (East)..... (late Toxteth Rural)
Garston.....
Fazakerley
Hospitals (Residences outside the City)	1	1	1	1	2
City	2	2	1	4	3	2	4	5	10	13	23

AGES AT DEATH.													
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 and up- wards.	All Ages.
...	2	2	3	3	8	5	...	...	23

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

SCARLET FEVER.

This disease, which had been prevalent to a considerable extent during the three years 1908-10 showed a marked falling off during 1911, and a still further reduction last year. The disease was of a mild type, accompanied by a much reduced rate of mortality.

There were 2,867 cases reported during the year, against 3,641 in the preceding year, 4,202 in 1910, 4,059 in 1909, 4,295 in 1908, 2,741 in 1907, 2,959 in 1906, 4,308 in 1905, 2,988 in 1904, and 4,053 in 1903. The public appreciation of the value of isolation continues, and 82·5 per cent. of the cases were removed to hospital, *i.e.*, 2,367 out of a total of 2,867 cases reported. The percentage of the total number of Scarlet Fever patients removed to hospital during each of the preceding ten years has been as follows:—53·4, 52·9, 74·6, 73·0, 74·0, 78·2, 82·1, 81·0, 84·3 and 83·6, showing that as accommodation was provided it was well availed of.

The mortality from this disease was 3·0 per cent., the great majority of the deaths being below five years of age (see table, page 30). This rate of mortality is lower than any previously recorded. In bygone years the loss of life from this disease was very much more serious than it is now.

Upon the interesting chart facing page 30 will be seen the death-rate from scarlet fever in the City of Liverpool during the last sixty years. For the first half of this period, at intervals of a year or so, the number of deaths resulting from scarlet fever reached proportions which would now be regarded with astonishment, but from the period when hospital

provision was found for the isolation of patients, and better administrative methods, aided by various Acts of Parliament, were adopted, there has been a remarkable drop in the fatality from this disease. The lesson is an important one, and may well be applied to other forms of infectious sickness, such as measles, which, although presenting difficulties of its own, would no doubt diminish in amount if a more complete isolation were possible.

The total number of deaths was 87, including 1 non-resident admitted to the City Infectious Hospital, against 131 last year, and an average of 177 during the preceding five years.

The number of deaths from Scarlet Fever during each of the preceding ten years, 1902-1911, has been as follows:—

1902	...	...	...	...	...	...	318
1903	...	...	...	...	...	...	201
1904	...	...	...	...	...	...	149
1905	...	...	...	...	...	...	303
1906	...	...	...	...	...	...	193
1907	...	...	...	...	...	...	140
1908	...	...	...	...	...	...	217
1909	...	...	...	...	...	...	219
1910	...	...	...	...	...	...	179
1911	...	...	...	...	...	...	131

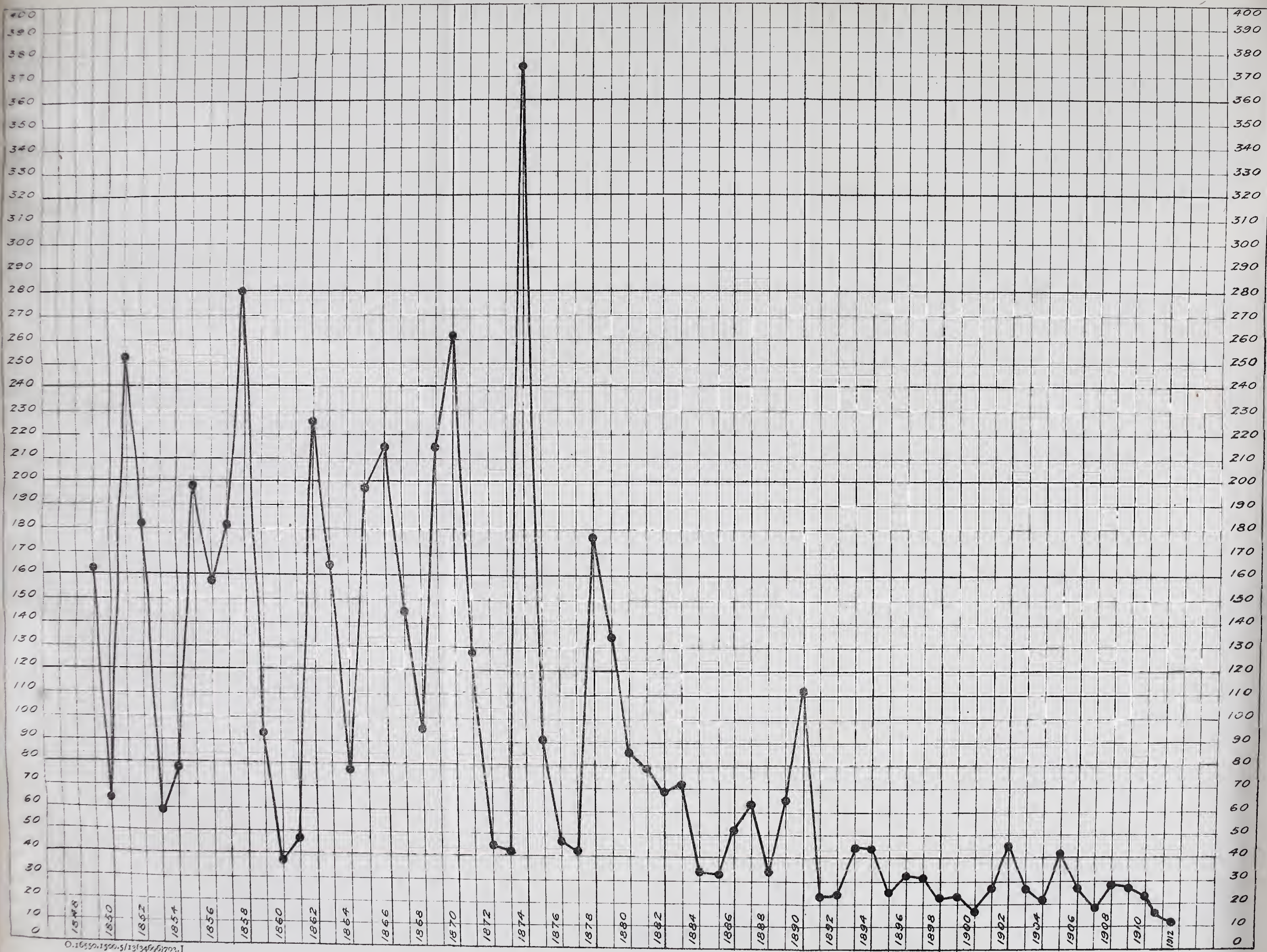
The table on the next page shows the periods of the year and the localities in which deaths from scarlet fever occurred, and also the ages at death:—

DEATHS FROM SCARLET FEVER.

DISTRICTS.	QUARTERS.								YEAR.		
	March		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland .....	...	...	1	...	2	2	...	...	3	2	5
Exchange .....	...	1	1	1	1	1	...	...	2	3	5
Abercromby .....	...	...	...	...	1	...	1	1	2	1	3
Everton	3	6	3	6	3	2	2	...	11	14	25
Kirkdale	1	...	...	...	...	1	...	...	1	1	2
West Derby (West)	1	2	3	...	1	1	2	1	7	4	11
Toxteth	3	...	...	2	3	...	3	4	9	6	15
Walton .....	...	2	5	1	...	1	...	1	5	5	10
West Derby (East)	1	...	...	...	...	...	1	...	2	...	2
Wavertree	1	1	1	...	...	...	...	2	2	3	5
Toxteth (East)..... (late Toxteth Rural)	...	...	...	...	...	...	1	...	1	...	1
Garston .....	...	2	...	...	...	...	...	...	...	2	2
Fazakerley .....	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City) .....	...	...	...	...	1	...	...	...	1	...	1
City	10	14	14	10	12	8	10	9	46	41	87

AGES AT DEATH.												
Under 1 year.	1—	2—	3—	4—	5	10—	15—	20—	30—	40—	50—	All Ages.
...	16	19	13	8	21	5	1	2	1	1	...	87

Deaths in Public Institutions are transferred to the Districts from whence the patients came.



MEASLES.

Measles was prevalent during the early months of the year to an extent which rendered necessary the closure for short periods of a number of the Infant Schools, between the middle of February and the middle of May, when all the Infants' Departments of all the Schools were closed for three weeks. The disease subsided to some extent during the Summer months, but again became prevalent in the Autumn, when the Infants' Departments of the Schools in the Southern and Eastern Districts of the City was closed at the end of October for five weeks (see page 130).

The total cases reported during the year were 8,075, showing a great increase compared with the preceding year, when the cases reported reached 4,719, as against 4,755 in 1910, 6,356 in 1909, 4,653 in 1908, 5,640 in 1907, 6,819 in 1906, 3,938 in 1905, 9,453 in 1904, 2,727 in 1903, and 7,141 in 1902. There were 877 deaths directly ascribed to it (10 being non-residents), the great majority of them being of infants below 3 years of age. The number of deaths in the preceding year was 327.

As has been frequently pointed out, the number of deaths does not fully indicate the destruction of life due to measles, since this disease is commonly associated with bronchitis and pneumonia, and it is beyond any question that deaths primarily due to measles are entered in the returns as due to pulmonary disease. The isolation of the infectious sick in hospital is important and necessary. Hospital accommodation, for a limited number of cases, has now been made for measles, but the deaths from measles do not show a decline comparable to that which has taken place in the other forms of infectious disease for which hospital accommodation is available. In the great number of homes in which measles occur isolation in the house is difficult or impossible. In making arrangements for hospital isolation of measles, difficulties of a special kind arise owing to the tender age of the patient, and the peculiarities of the infection in this form of disease.

The tendency of this disease to recur at intervals of about 18 months is well illustrated in the accompanying diagrams. There was, however, no considerable outbreak from May, 1906, until the spring of 1909 and of 1910. The outbreak during 1912 was the worst since 1904.

Leaflets containing the following advice to parents were widely distributed in the districts affected with the disease:—

MEASLES.

Measles is an extremely catching and very dangerous disease. A large number of children lose their lives through it every year, from want of proper care and attention.

Symptoms.

Measles usually begins with running at the eyes and nose, sneezing and coughing. This is followed in a few days by a blotchy red rash on the face and body. When measles is in the neighbourhood you should be very suspicious if a child has a bad cold, and a careful watch should be kept for three or four days to see if the rash comes out.

Usually about twelve days elapse before a child who has been exposed to the disease shows the first symptoms, namely, those of a cold.

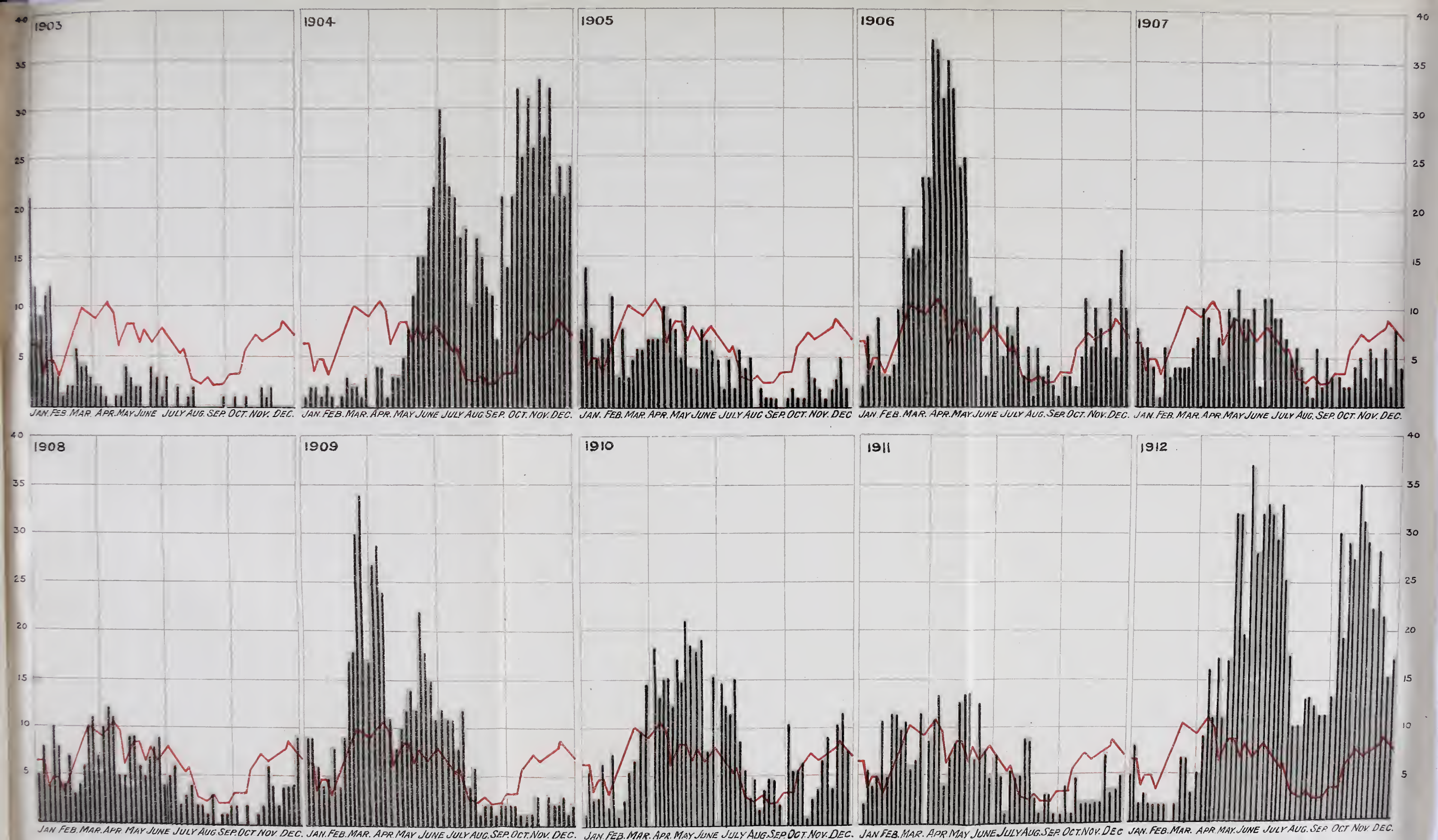
Treatment.

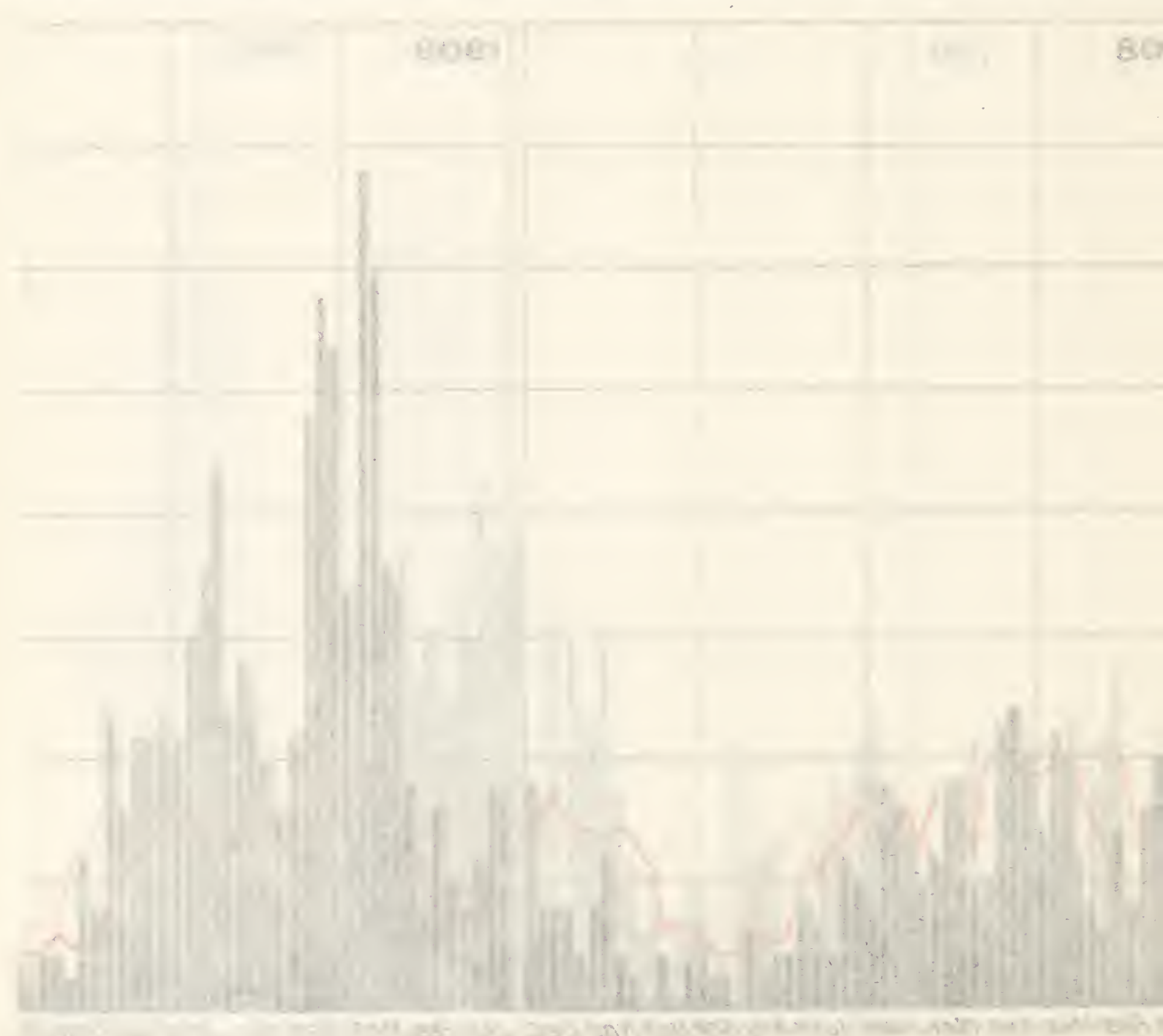
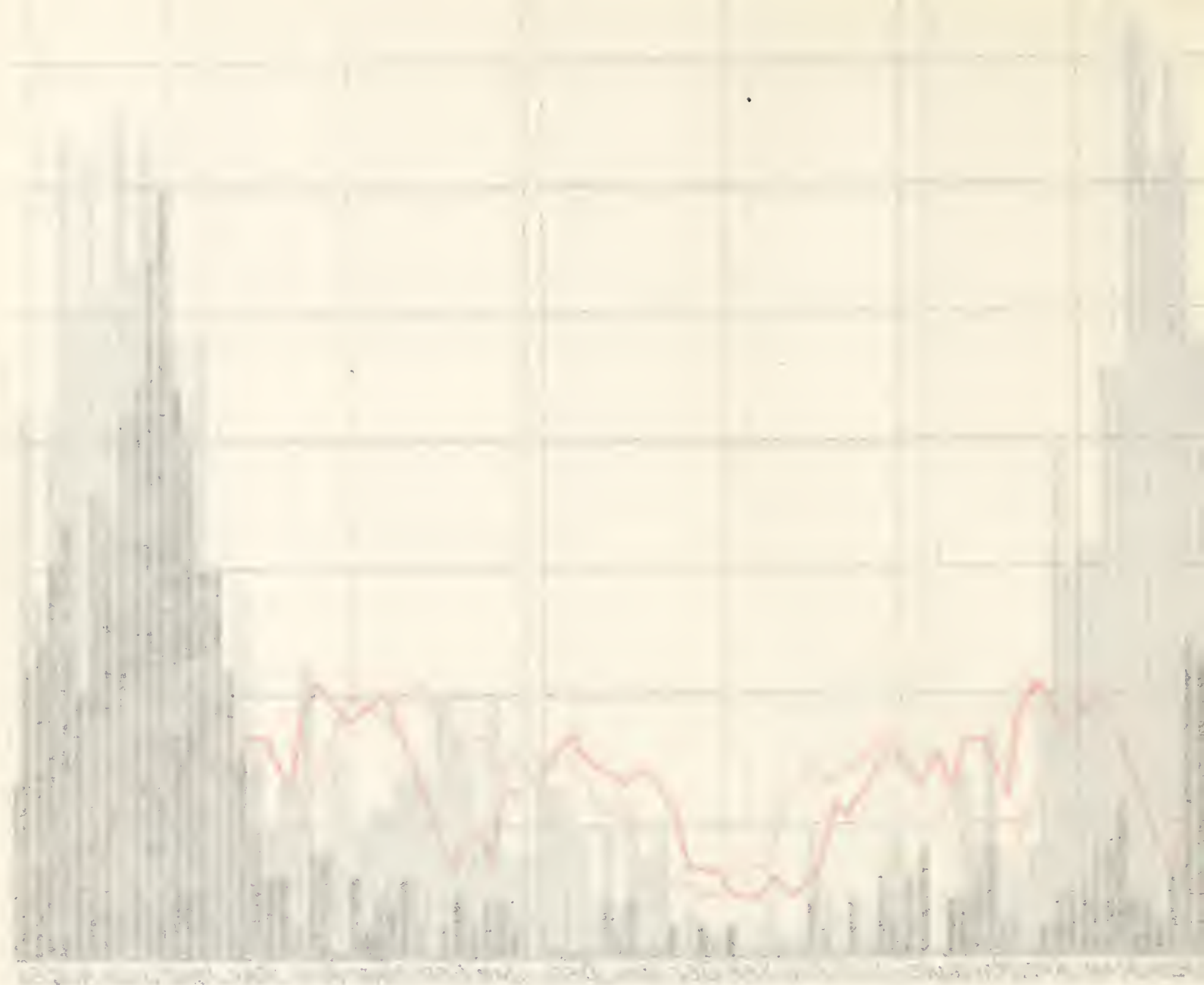
In every case, even though it seems mild, the doctor should be called in. The patients should be warmly clothed and kept in bed so long as they remain feverish. The room in which they should remain until they have quite recovered should be warm but well ventilated. It is very dangerous to take the children out of doors or into draughty passages or cold rooms before they have recovered.

A child commencing or thought to be commencing with measles should be kept away from school at once, and the teachers should be informed of the reason.

To prevent spread.

Keep the patient apart from all other children for at least two weeks from the beginning of the illness. Never allow any child, especially a baby in arms, to be taken into any house in which there is a case of measles, and do not allow a child to play with another who has not yet recovered from the disease. Do not allow any other children to come into your house if you have a case of measles. It is quite wrong to suppose that every child must have measles some time, and that the sooner it is over the better. The longer you can put off the disease the less is the likelihood of a dangerous attack, and many children escape the disease entirely. The younger the child the greater the danger.





The following table shows the periods of the year and the localities in which deaths from Measles occurred, and also the ages at death.

The number of deaths from Measles during each of the preceding ten years, 1902-1911, has been as follows:—334, 132, 696, 247, 586, 291, 259, 471, 474 and 327.

DISTRICTS.	QUARTERS.								YEAR.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
Scotland	3	2	33	42	28	29	2	2	66	75	141
Exchange.....	3	8	10	18	7	8	5	3	25	37	62
Abercromby.....	1	2	6	4	4	7	7	15	18	28	46
Everton	4	7	43	34	32	32	23	20	102	93	195
Kirkdale	1	...	23	13	14	11	5	5	43	29	72
West Derby (West)	1	1	11	8	24	14	31	22	67	45	112
Toxteth	5	4	4	4	11	4	55	67	75	79	154
Walton.....	2	2	3	2	4	4	5	1	14	9	23
West Derby (East).....	...	...	3	3	3	...	5	9	11	12	23
Wavertree .....	...	...	...	...	2	...	8	8	10	8	18
Toxteth (East)..... (late Toxteth Rural)	...	1	...	...	1	...	3	1	4	2	6
Garston .....	...	...	...	...	3	2	7	2	10	4	14
Fazakerley .....	...	...	...	...	...	...	1	...	1	...	1
Hospitals (Residences outside the City) .....	...	...	1	1	3	2	1	2	5	5	10
City	20	27	137	129	136	113	158	157	451	426	877

AGES AT DEATH.

Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
153	350	195	92	42	45	...	...	...	...	...	...	877

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

In conformity with the wishes of the Chairman of the Education Committee, and the Chairman of the Elementary Schools Management Sub-Committee, the Medical Officer submitted in June a memorandum upon the complex and difficult question of the incidence of Measles, which included the following paragraphs:—

“The Committee will probably be aware that this disease has destroyed more lives in Liverpool during the past six years than Scarlet Fever, Diphtheria, Typhoid Fever, and Typhus Fever all put together, although these latter diseases are usually regarded as the more formidable diseases of the zymotic type.

“Measles occurs in epidemic waves of varying duration and intensity, and the mortality rate is influenced to a considerable extent by the season of the year at which the epidemic prevails.

“Looking back over a series of years, it appears that the more recent epidemic waves are separated by slightly longer intervals of time, and on the whole the tendency is for the number of deaths in proportion to the population to diminish also.

“The fatal incidence occurs chiefly amongst the infants below two years of age. Attacks of measles, therefore, at that age are more dangerous to life than if they can be postponed to a later age.

“If it must be granted that measles is inevitable, the foregoing facts point to two definite objects to be aimed at; one is to postpone the disease as long as possible, and the other is to endeavour to avoid the occurrence of the outbreak during the winter months.

“It is a matter of common knowledge that, as a result of the great sanitary operations carried out in Liverpool, certain zymotic diseases have, during the last fifteen years, diminished to a very considerable degree, as the following table shows:—

Year.		Deaths from Scarlet Fever.		Deaths from Typhoid Fever.		Deaths from Typhus Fever.
1896	...	216	...	166	...	36
1911	...	128	...	32	...	5

“ Measles, on the other hand, shows no such marked diminution, viz. :—

1896	...	...	...	...	300 deaths.
1911	...	...	...	...	309 do.

“ The rates of mortality from each of these diseases per 100,000 of the population during each of the two years respectively are as follows, viz. :—

Year.	Measles.	Scarlet Fever.	Typhoid Fever.	Typhus Fever.
1896	... 45·5	... 32·8	... 24·3	... 5·4
1911	... 41·3	... 17·1	... 4·2	... 0·6

“ The death rates from Measles, calculated per 100,000 persons per annum, during the last 25 years are as follows, viz. :—

1886-1895.	1896-1905.	1906-1910.
74·3	... 47·5	... 55·3

Whooping Cough, like Measles, shows but a trifling decline.

“ Among the difficulties in dealing with Measles are the following :—

1. The disease is infectious before any definite evidence of its real nature presents itself.

2. The tender age of the patients has rendered isolation in hospital difficult, and even undesirable. It is not a good thing to separate a mother from her infant of tender age, especially when the child is ill. If the mother could accompany the infant one of these difficulties would be removed, but her domestic duties and the claims usually of a large young family prevent this. Furthermore, the amount of hospital accommodation (probably on account of these reasons) is relatively small.

3. The prolonged incubation throws relatives off their guard as to the need for precautionary measures.

4. Frequently no doctor is called in until too late to avert fatal results.

“ The complications of measles are usually bronchitis, pneumonia and other chest affections, and it is this circumstance which explains to a certain extent the extra fatalities during the winter season. What is of hardly less importance is that an attack of measles pre-disposes to, and renders more serious, any other infection which may be prevalent at the time, such as Whooping Cough or Infantile Diarrhœa.

“ In view of the circumstance that it is not the children of school age who suffer, the question is sometimes asked, ‘ Why should schools be closed?’ and the answer is that schools are known to have a definite effect in the spread of Measles, the school-child conveying the infection into its home, which had not previously been invaded.

“ The Committee will be aware of the careful methods adopted by the Medical Officer of Health’s Department, and by the Education Authority and the school teachers to exclude infected children from school. They will also be aware that it is not an unusual thing to find children in school actually suffering from an infectious disease.

“ As a matter of fact there is a constant daily routine of watchfulness for cases of this kind, and all parties concerned are alive to the necessity of exercising vigilance in the matter.

“ Previous experiences afford some help in gauging the advantages which may result from the closure of the Infant Schools during times of epidemic prevalence of measles.

“ In the Medical Officer’s Report for the year 1902 the subject is discussed, and a table is given indicating the number of cases of measles reported during one month before the summer and winter holidays, and during one month after such holidays, in the four years 1896-1899 inclusive—precisely the same machinery for notification being in force during each period. The contrast in the figures is very remarkable. In 1897 there were 991 cases reported during the month preceding the summer holidays, and during the month after the holidays there were only 131 cases notified; again in 1899, during the month before the summer holidays there were 1,325 cases reported and 182 during the

month after. Taking the summer holidays for the whole of the four years, the average number of cases reported was 763 during the four weeks preceding the holidays, and 121 during the four weeks following the holidays.

“ During the corresponding winter seasons, the averages of the four years were—313 cases reported during the month preceding the holidays, and 144 during the month following the holidays.

“ Again in 1901, when school closure was resorted to, the number of cases reported in the month preceding the closure was 2,075, and during the month following the period of closure it was 616.

“ In 1906, when school closure was resorted to, the number of deaths immediately began to decrease after the schools had been closed for two weeks, and this decrease continued.

“ These are facts which are not without importance. At the same time it must be borne in mind that an epidemic wave of measles will in due course spend itself, and the influence which school closure exercises at the commencement of an epidemic will have a very different significance to that which it exercises at the close. Obviously at the close of an epidemic the disease is subsiding whether the schools are closed or not.

“ It becomes important, however, to close, before the epidemic has got its grip on the schools, if the closure is to be of any value whatever. This consideration would no doubt weigh with School Managers and others who think it unreasonable to close an Infant Department before it is ravaged with disease.

“ Clearly the school closure is only one link in a chain of defence, and infection spreads by many other ways than by the schools. There is very definite evidence, however, that school closure does check and postpone a rising epidemic; evidence which is confirmed by the observation that sometimes on the re-assembling of the schools, when the period of incubation has passed, the outbreak resumes its old intensity and destructiveness.

“The Committee will be aware that amongst the poor and ignorant mothers it is not an uncommon practice, when measles breaks out in the house, to put those children who have not suffered with the sufferers, in order that they may all have it together and get it over. This is, of course, a wholly indefensible procedure, but it is not unlikely that a few Managers of schools may, in view of the recurrence of outbreaks of measles, share the view that the school may as well get it over and have done with it, and that efforts to postpone what is inevitable are not worth the trouble and inconvenience of making, and in any event are ultimately futile.

“A little consideration, however, would dispel this view. There is no one, for example, who does not do all he can to postpone death, notwithstanding that he is perfectly well aware that his efforts in the long run will be futile.

“A clause was inserted in the Liverpool Corporation Bill, 1908, the object of which was to ensure the notification to the Medical Officer of Health, and the Head Teachers, of the occurrence of measles in the home of any school child. Parliament at that time refused to consent to this clause, but the re-insertion of the clause in the next Bill may be received in a more reasonable manner, and it is worth considering whether this plan should not be adopted.

“For reasons already indicated, measles is not scheduled as one of the compulsorily notifiable diseases; indeed, in two important towns in which it has been scheduled the practice was discontinued, as it was believed to be useless. Possibly it is owing to the absence of compulsory notification that the light view so many parents take of the disease exists. The fact of it being of sufficient importance to justify the Medical Officer of Health in advising the Education Committee to close the Infants' Schools, and the fact that the Education Committee take a serious view of the disease, is a great object-lesson to parents throughout the City to regard it seriously also.”

WHOOPING-COUGH.

This disease, which again showed a considerable prevalence in the City, is one of the most distressing and painful causes of death in very early life; a large number of deaths certified to be primarily due to diseases of the lungs are found on inquiry to have originated in whooping-cough, the great majority of the deaths occurring below two years of age, and nearly one-half below twelve months of age. It is plain from this circumstance that isolation of the infected infant in hospital presents many difficulties, similar in character to those which arise in the case of Measles. In a large proportion of cases the patient would have to be accompanied by the mother, whilst the period of detention in hospital would in the majority of cases be protracted. During last year 272 deaths were directly attributed to whooping-cough, but this figure is by no means a complete representation of the mischief caused by it. The number of deaths in the preceding year was 246.

Notwithstanding the difficulties in the way, isolation for a limited number of cases has been found, and some lessening of this disease may be expected with confidence. Experience has repeatedly shown that the introduction of a case of whooping-cough into a court has resulted in the spread of the infection to practically the whole of the infant population in that court.

Leaflets containing the following advice to parents were widely distributed in the districts affected with the disease:—

WHOOPING COUGH.

Whooping cough is a very infectious as well as an exceedingly dangerous and distressing disease of early childhood and of infancy. Many children lose their lives through want of proper attention and nursing.

Symptoms.

The disease usually begins like a feverish cold, and is infectious from the start. The cough soon comes on in paroxysms, which threaten almost to suffocate the child, who frequently vomits. The whoop may come on later.

Treatment.

The doctor should be called in, even in what appear to be mild cases. The patient should be warmly clothed and kept in bed until the severity of the attack has worn off. The room should be kept warm and well ventilated.

To prevent spread.

As whooping cough is catching, keep all other children away from the patient for five weeks from the beginning of the whooping, and do not let the child return to school till quite recovered.

When whooping cough is in the neighbourhood, look upon all colds with suspicion. Never allow any child, especially a baby in arms, to be taken into any house in which there is a case of whooping cough, and do not allow any child to play with another who has not yet recovered from the disease. At the same time do not allow any other children to come into your house if you have a case of whooping cough.

On recovery, the child's clothes and bed linen, etc., should be washed, and what cannot be washed should be well aired in the yard or garden, whilst the windows should be thrown open and the room well flushed with fresh air.

The longer the disease can be put off, the less likely is it to be fatal.

A child commencing, or thought to be commencing, with whooping-cough should be kept away from school at once, and the teacher should be informed of the reason.

Measles and Whooping Cough destroy more lives than all the other infectious diseases put together.

The following table shows the periods of the year and the localities in which deaths from Whooping-cough occurred, and also the ages at death.

The number of deaths from Whooping-cough during each of the preceding ten years, 1902-1911, has been as follows:—407, 318, 426, 151, 362, 324, 346, 228, 450 and 246.

DISTRICTS.	QUARTERS.								YEAR.		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	1	5	13	13	2	7	3	2	19	27	46
Exchange .....	...	1	2	4	3	4	4	3	9	12	21
Abercromby	1	...	...	2	2	2	2	2	5	6	11
Everton	6	5	14	18	3	11	...	1	23	35	58
Kirkdale.....	2	1	3	7	5	4	4	3	14	15	29
West Derby (West)	4	5	1	4	2	7	1	1	8	17	25
Toxteth .....	...	2	6	1	3	7	4	7	13	17	30
Walton	3	3	...	1	2	...	1	1	6	5	11
West Derby (East)	2	2	2	1	2	1	1	...	7	4	11
Wavertree	2	5	1	1	1	1	1	1	5	8	13
Toxteth (East)..... (late Toxteth Rural).	1	...	1	...	1	...	...	...	3	...	3
Garston .....	...	...	1	1	2	3	2	...	5	4	9
Fazakerley.....	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	1	1	...	1	1	1	...	...	2	3	5
City	23	30	44	54	29	48	23	21	119	153	272

AGES AT DEATH.												
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	All Ages.
116	77	41	16	12	10	...	...	...	...	...	...	272

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

DIPHThERIA.

Deaths from Diphtheria attained their maximum during the first quarter of the year. Appended is a table showing the periods of the year and the localities in which the deaths from Diphtheria occurred, and also the ages at death.

The number of deaths during each of the preceding ten years has been as follows:—200, 153, 181, 138, 137, 95, 124, 112, 100 and 125.

DISTRICTS.	QUARTERS.								YEAR		
	March.		June.		Sept.		Dec.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland .....	...	...	1	1	...	...	...	...	1	1	2
Exchange .....	...	1	1	...	...	...	...	1	1	2	3
Abercromby	1	...	...	...	...	1	...	1	1	2	3
Everton	3	2	2	1	3	1	1	6	9	10	19
Kirkdale	2	3	...	1	...	3	...	2	2	9	11
West Derby (West)	3	...	3	1	...	1	4	2	10	4	14
Toxteth	3	3	2	4	2	...	1	6	8	13	21
Walton	1	6	1	...	...	1	1	...	3	7	10
West Derby (East) .....	...	1	...	...	...	...	2	...	2	1	3
Wavertree	1	2	4	2	...	1	...	1	5	6	11
Toxteth (East) .....	...	...	...	...	...	...	...	...	...	...	...
(late Toxteth Rural).											
Garston .....	...	3	1	...	1	...	...	...	2	3	5
Fazakerley,.....	1	1	...	...	...	...	...	...	1	1	2
Hospitals (Residences out- side the City).....	3	1	1	1	...	...	...	1	4	3	7
City	18	23	16	11	6	8	9	20	49	62	111*

AGES AT DEATH													
Under 1 year.	1--	2--	3--	4--	5--	10--	15--	20--	30	40--	50--	60--	All Ages.
6	19	14	20	12	30	5	1	3	1	...	...	...	*111

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

* NOTE.—Three deaths certified as due to Membranous Croup are included in this number.

ZYMOTIC DIARRHŒA.

Zymotic Diarrhœa is one of the most fatal diseases of infants in this City; it is by no means confined to infancy, but during 1912, as in preceding years, more than one-half of the total number of deaths were of infants under twelve months old. It is most satisfactory to be able to record a very marked decline in this form of disease, a result no doubt due partly to the low temperature and amount of rain in the summer months, as well as to the increased municipal effort to lessen the prevalence of the disease. The disease did not begin to figure prominently in the mortality returns until the beginning of August, and then only to a limited extent compared with past years. A little over 500 deaths were registered from it, which represents a lower proportion to the population than has been recorded in any previous year.

Deaths from Enteritis under two years of age are, at the request of the Registrar-General, now classified as Diarrhœa. The deaths from Enteritis amounted during the year to 230.

Investigation proves incontestably that the deaths of infants from this cause are closely associated with the method of feeding, putrefying food being the medium by which the specific poison is commonly introduced. The deaths amongst children under three months of age, either wholly or partially fed on artificial foods, are fifteen times as great as they are amongst an equal number of infants fed upon breast milk; *e.g.*, investigation has tended to prove that, out of every 1,000 infants under three months of age, naturally fed upon breast milk alone, 20 die of autumnal choleraic disease; but if the same number of infants, at the same age, are artificially fed, then, instead of 20 dying, as many as 300 will die from this cause. It is mainly with a view to meet this

excessive mortality that sterilized milk depôts have been established, to ensure a supply of food for infants which is bacteria-free, and which can be given without any exposure to sources of contamination. (See also pp. 13 and 193.)

The connection between the meteorological conditions and the prevalence of zymotic diarrhœa during the third quarter of the year, is well shown in the following diagrams.

These four diagrams give the daily variations of the rainfall and the mean temperature of the air, during the months of June to September, and the daily deaths from zymotic diarrhœa during July, August, September, and October, for the years 1909-10-11 and 12.

In comparing the years 1909, 1910 and 1912 with the year 1911 it will be seen that the mean temperature in the latter year frequently rose far above the 30 years' average, and remained so for several days together. It seldom fell below the average. The rainfall during the year 1911 was scanty, in spite of two heavy falls of rain on the 5th August and 11th September. The summer and autumn of that year was characterised by severe attacks of diarrhœa. On the other hand the mean temperature during the years 1909, 1910 and 1912 was usually below the average, and rarely rose above it, and then only for short intervals of a day or so. The amount of rain which fell was much greater. These conditions were associated with a death-rate from diarrhœa which was about one-third of that which occurred in 1911; but the effects of the strike (see page 48 in the Report for 1911) must be taken into consideration.

The numbers of deaths during each of the preceding ten years have been as follows:—611, 657, 1,785, 960, 1,298, 544, 630, 514, 540 and 1,645.

Provision was made during the year for the treatment at the Fazakerley Hospital of a limited number of infants suffering from infantile diarrhœa.

Valuable service has been rendered in previous years by the authorities of the Royal Infirmary, Stanley Hospital, David Lewis Northern Hospital, Belmont Road Hospital, and Children's Infirmary in receiving a considerable number of patients, all of them infants, suffering from this disease. In some instances the cost was defrayed by the Corporation.

DEATHS FROM DIARRHŒA.

The following table gives the Districts in which fatal diarrhœa occurred, the seasons in which it took place and the ages of the patients. It will be seen that the greatest fatality was amongst infants under 12 months of age:—

DISTRICTS.				QUARTERS.								YEAR.		
				March.		June.		Sept.		Dec.				
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland ...	...	...	...	4	...	6	4	26	17	12	6	48	27	75
Exchange	...	...	...	2	1	6	5	14	8	9	9	31	23	54
Abercromby	...	...	...	2	1	2	2	10	4	5	3	19	10	29
Everton ...	...	...	...	6	4	11	7	25	17	14	7	56	35	91
Kirkdale ...	...	...	...	3	1	3	4	7	11	7	6	20	22	42
West Derby (West)	...	...	...	1	4	4	4	11	6	9	5	25	19	44
Toxteth ...	...	...	...	10	3	2	3	9	14	19	9	40	29	69
Walton ...	...	...	...	5	3	4	3	4	6	5	3	18	15	33
West Derby (East)	...	...	...	2	1	3	5	5	3	2	1	12	10	22
Wavertree	...	...	...	2	2	1	2	1	1	2	4	6	9	15
Toxteth (East) ...	...	...	...	3	1	2	...	...	...	1	...	6	1	7
(late Toxteth Rural)														
Garston				2	...	3	...	5	2	1	...	11	2	13
Fazakerley .....				...	...	...	...	1	...	...	...	1	...	1
Hospitals (Residences outside the City)	...	...	...	...	1	2	1	4	3	1	2	7	7	14
City	...	...	...	42	22	49	40	122	92	87	55	300	209	509

AGES AT DEATH.													
Under 1 year.	1—	2—	3—	4—	5—	10—	15—	20—	30—	40—	50—	60 & up-wards.	All Ages.
332	140	19	6	2	1	2	...	...	...	...	...	7	509

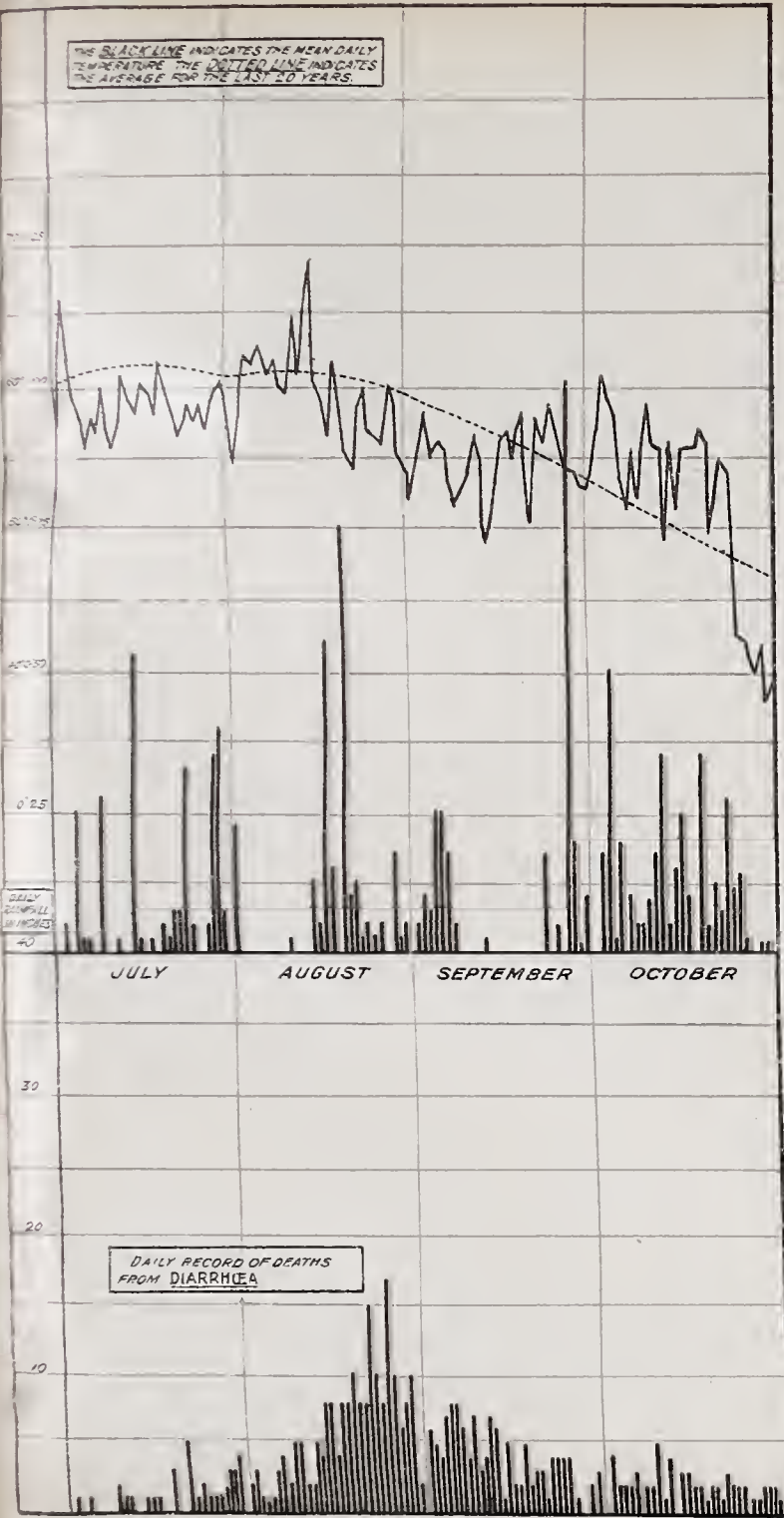
Deaths in Public Institutions are transferred to the Districts from whence the patients came.

List of Streets in the City wherein Three or more Deaths from
Diarrhœa occurred during the year 1912.

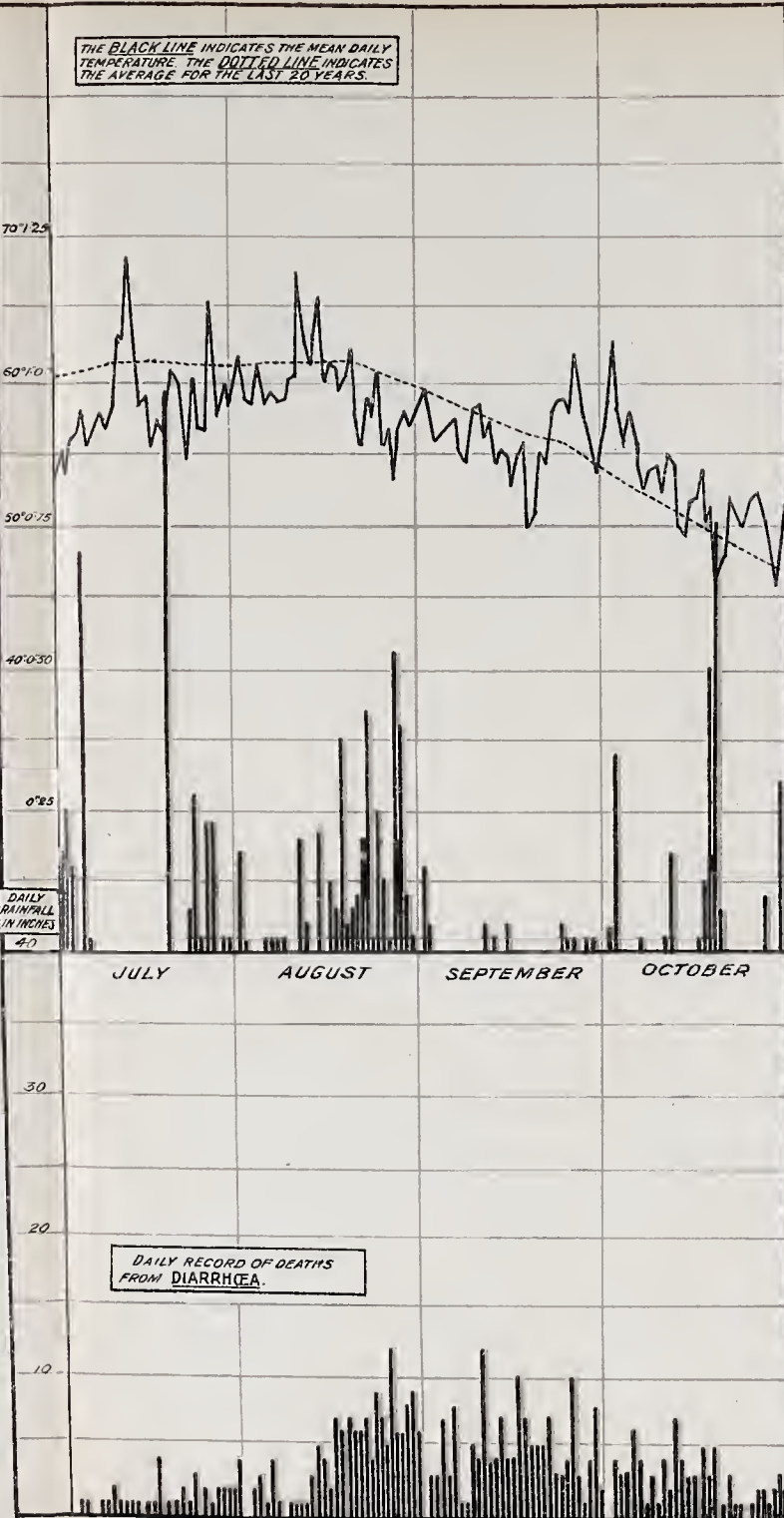
STREETS.											No. of Deaths.
Arkwright	...	...	...	...	...	...	...	...	...	...	3
Beaufort	...	...	...	...	...	...	...	...	...	...	6
Beresford	...	...	...	...	...	...	...	...	...	...	3
Burlington	...	...	...	...	...	...	...	...	...	...	6
Field	...	...	...	...	...	...	...	...	...	...	4
Gerard	...	...	...	...	...	...	...	...	..	...	3
Haigh	...	...	...	...	...	...	..	...	...	...	3
Hopwood	...	...	...	...	...	...	...	...	...	...	4
Hunter	...	...	...	...	...	...	...	...	...	...	3
Lamport	...	...	...	...	...	...	...	...	...	...	3
Maria Road	...	...	...	...	...	...	...	...	...	...	3
Newsham	...	...	...	...	...	...	...	...	...	...	3
Robsart	...	...	...	...	...	...	...	...	...	...	3
Trueman	...	...	...	...	...	...	...	...	...	...	3
Upper Frederick	...	...	...	...	...	...	...	...	...	...	5
Victoria Square	...	...	...	...	...	...	...	...	...	...	4
Vulcan (Garston)	...	...	...	...	...	...	...	...	...	...	3

In arranging the foregoing list of streets, all deaths occurring in hospitals have been transferred to the streets from whence the patients were removed.

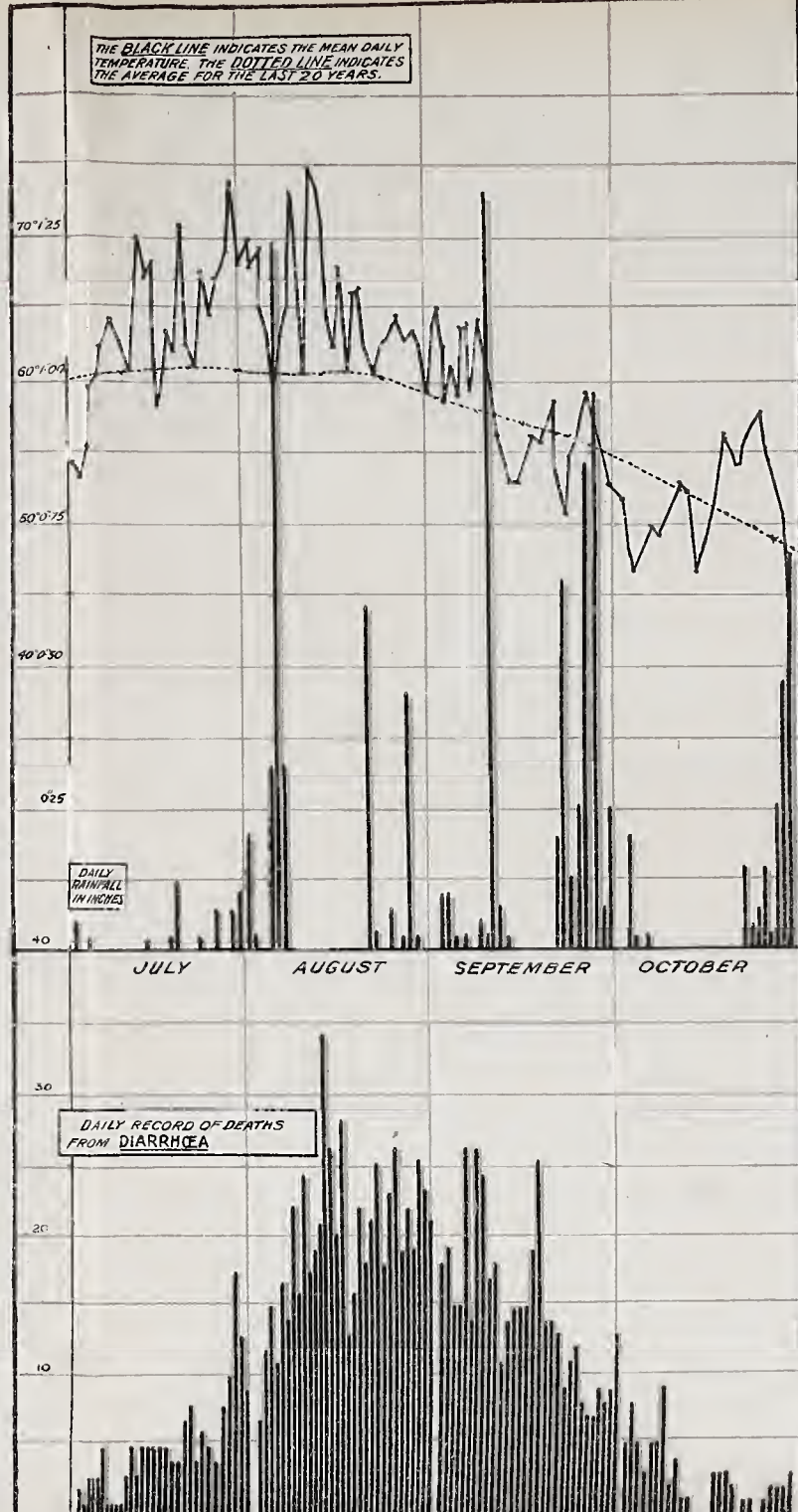
YEAR 1909.



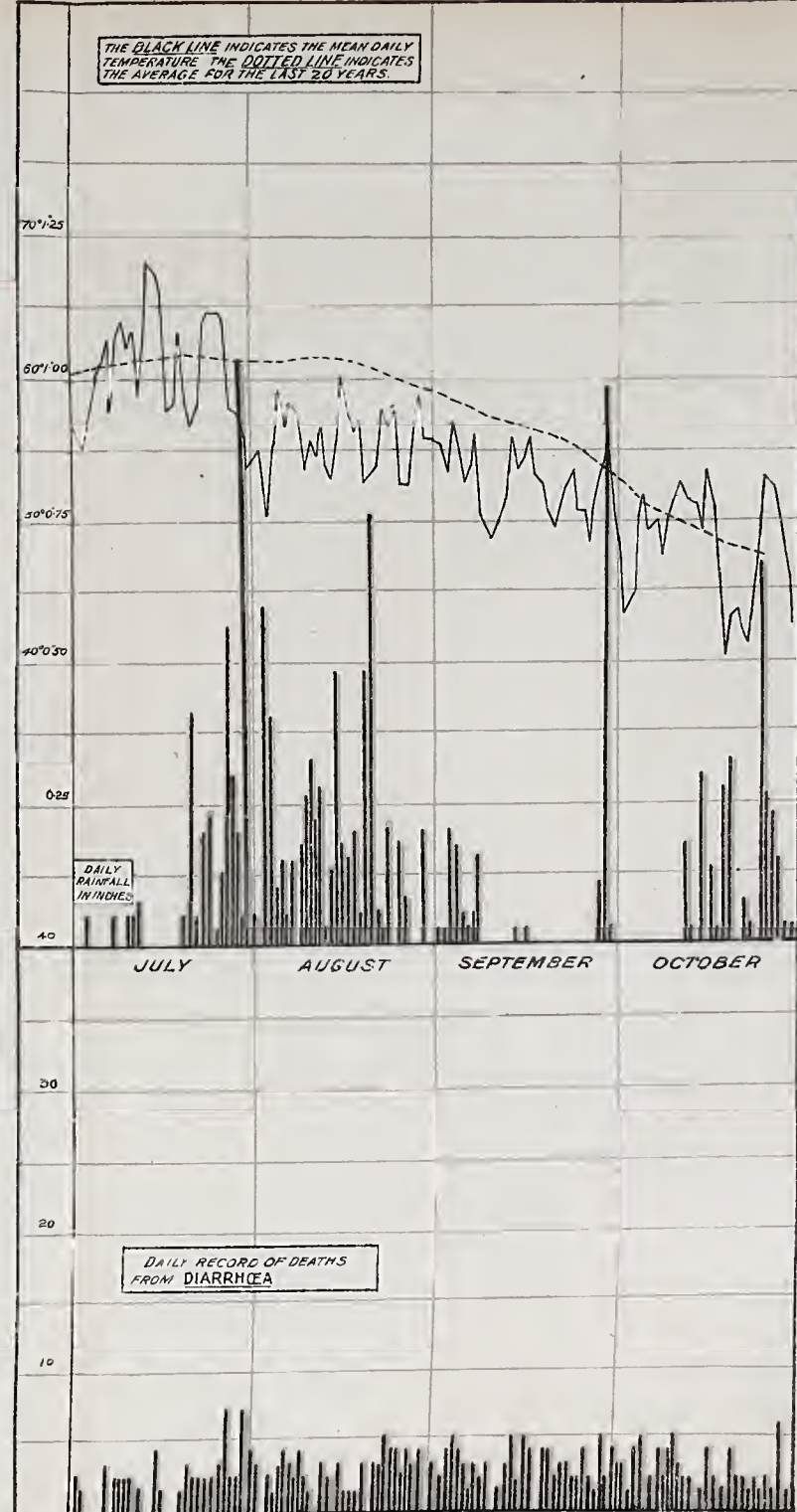
YEAR 1910.



YEAR 1911.



YEAR 1912.



The following is a copy of the Notice circulated freely in the districts affected by the disease :—

INFANTILE DIARRHŒA.

Is caused by dirt.

To Avoid it.

Mothers must wash their Children, and themselves, every morning.

The clothes, beds and house must be kept clean.

Slops must be emptied every morning.

Is caused by want of fresh air.

To Avoid it.

Windows must be opened every day.

Is caused by improper food.

To Avoid it.

Up to six months of age, infants must be fed entirely at the breast.

No child should be kept at the breast longer than twelve months.

If infants cannot be fed at the breast, the Humanised Milk can be obtained by anyone requiring it from the Corporation Depôts, or from the milk shops.

Cow's milk should be boiled before using, and clean vessels must be used.

No beer, nor whisky, nor solid food must be given to infants.

All food must be fresh, especially fish and fruit.

All food, especially milk, must be carefully guarded from
FLIES.

Is caused by neglect.

To Avoid it.

Parents going out to work must leave their children in charge of some responsible person who will see that they are properly fed and kept clean.

On the first symptoms of diarrhœa, children should be taken to the
Doctor.

OTHER ZYMOTICS.

The following table indicates the localities in which deaths from other forms of zymotic disease occurred during the year:—

DISTRICTS.	Influenza.		Erysipelas.		Syphilis.		Rheumatic Fever.		Puerperal Fever.		Other Zymotics.		Year.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland	2	2	1	...	3	3	...	1	...	2	...	3	17
Exchange .....	...	...	1	...	4	4	...	...	...	3	...	2	14
Abercromby	5	...	1	1	2	2	1	...	...	...	3	...	15
Everton	5	2	2	3	7	3	2	2	...	5	5	3	39
Kirkdale	3	3	1	...	3	1	5	4	...	1	1	...	22
West Derby (West) ..	2	4	...	1	5	2	1	3	...	2	1	1	22
Toxteth	6	1	2	...	4	6	1	1	...	1	6	...	28
Walton .....	...	...	2	1	1	1	2	4	...	1	...	...	12
West Derby (East)...	4	2	...	1	2	1	...	...	...	...	2	2	14
Wavertree	2	3	...	1	...	...	...	4	...	...	2	...	12
Toxteth (East) (late Toxteth Rural)	...	...	1	1	1	2	...	1	...	...	1	...	7
Garston	3	...	1	...	1	1	...	2	...	...	...	1	9
Fazakerley .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Hospitals(Residences outside the City) ..	1	...	...	...	1	1	...	...	...	3	2	2	10
City	33	17	12	9	34	27	12	22	...	18	23	14	221

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

THE FOLLOWING TABLE SHOWING THE ANNUAL AVERAGE NUMBER OF DEATHS FROM SEVEN OF THE PRINCIPAL ZYMOTIC DISEASES DURING EACH OF THE LAST FOUR DECENNIAL PERIODS, IS INTERESTING AND INSTRUCTIVE. THE DECLINE IN THE MORE FORMIDABLE FORMS OF INFECTIOUS DISEASES IS VERY MARKED.

Years.	Small Pox.	Typhus.	Typhoid.	Scarlet Fever.	Measles.	Whooping Cough.	Diarrhoea.
1866 to 1875	237.4	652.8	† —	789.4	425.7	496.8	995.3
1876 to 1885	90.8	238.0	126.4	421.2	517.8	472.3	658.4
1886 to 1895	8.8	37.1	153.0	257.5	399.5	322.4	600.6
*1896 to 1905	19.5	25.1	134.4	201.3	329.0	330.4	1,051.9
1906-12.....	.2	6.7	50.7	161.0	458.7	313.0	802.1

* Including extended City area.

† Records not available.

ANNUAL AVERAGE NUMBER OF DEATHS FROM SEVEN OF THE PRINCIPAL ZYMOTIC DISEASES
DURING EACH OF THE LAST FOUR DECENNIAL PERIODS, DISTINGUISHING THOSE
OF PERSONS ABOVE AND BELOW FIVE YEARS OF AGE.

YEARS.	SMALLPOX.		TYPHUS.		TYPHOID.		SCARLET FEVER.		MEASLES.		WHOPPING COUGH.		DIARRHŒA.	
	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.	Above 5.	Below 5.
1866 to 1875	141.7	95.7	* —	* —	* —	—	187.7	601.7	14.4	411.3	9.9	486.9	105.7	889.6
1876 to 1885	62.5	28.3	+ 190.0	+ 5.1	+ 110.3	† 12.1	137.0	284.2	35.4	482.4	18.6	453.7	61.9	596.5
1886 to 1895	6.2	2.6	36.2	.9	142.0	11.0	87.6	169.9	28.3	371.2	15.1	307.3	60.2	540.4
**1896 to 1905	14.5	5.0	24.2	.9	128.4	6.0	61.7	139.6	17.1	311.9	11.9	318.5	53.6	1,008.3
1906-12	.2	—	6.4	.3	49.4	1.3	57.6	103.4	24.3	434.4	10.0	303.0	32.4	769.7

* During these years the ages at death from Typhus and Typhoid were not differentiated.

** Including extended City area.

† During the six years, 1880-1885.

The following table shows the number of deaths, the annual average death-rate per 100,000 of the population from the undermentioned forms of disease during the last five decades, 1856 to 1905; during the last seven years, 1906-1912, and during 1912:—

DISEASE.	Average Population.....	1856 to 1865.	1866 to 1875.	1876 to 1885.	1886 to 1895.	1896† to 1905.	1906-12.	1912.
		443,938.	493,405.	538,651.	536,974.	691,351.	739,001.	752,021
Scarlet Fever	Total Deaths.....	5,994	7,894	4,212	2,575	2,013	1,127	86
	Rate per 100,000 per annum.	135·0	159·9	78·1	47·9	29·1	21·7	11·4
Typhus Fever	Total Deaths.....	7,482	6,528	2,380	371	251	47	2
	Rate per 100,000 per annum.	168·5	132·2	44·1	6·9	3·6	0·9	0·2
Typhoid Fever	Total Deaths.....	*	*	1,264	1,530	1,344	355	21
	Rate per 100,000 per annum.			21·5	28·4	19·3	6·8	2·7
Measles	Total Deaths.....	3,215	4,257	5,178	3,995	3,290	3,211	867
	Rate per 100,000 per annum.	72·4	86·2	96·1	74·3	47·5	62·0	115·2
Whooping Cough	Total Deaths.....	4,779	4,968	4,723	3,224	3,304	2,191	267
	Rate per 100,000 per annum.	107·6	100·6	87·6	60·0	47·7	42·3	35·5
Smallpox	Total Deaths.....	1,673	2,374	908	88	195	2	1
	Rate per 100,000 per annum.	37·6	48·1	16·8	1·6	2·8	·003	0·13
Phthisis	Total Deaths.....	15,572	16,476	13,754	11,436	12,632	7,861	1,113
	Rate per 100,000 per annum.	350·7	333·9	255·3	212·9	182·7	151·9	148·0

† City Boundaries extended in 1895. * Records not available.

PULMONARY TUBERCULOSIS.

During the year under review a large number of applications were received for sanatorium treatment. The accommodation available at the Fazakerley and Parkhill Sanatoria has been taxed to the utmost, the good work of the institutions being fully recognised by the medical profession and the public; the Hospitals Committee, on the request of the Health Committee, are engaged upon a scheme which it may be hoped will fully meet the City's needs.

Although many suitable cases of phthisis have had to wait a considerable time before they could be received for treatment, yet comparatively few adult cases make application early enough, and the great majority of these are found on examination to be the subjects of well-established phthisis, in whom the prospects of a complete cure is remote. At the same time, the isolation of more advanced cases is eminently necessary, being beneficial not only to the patient, whose comfort is greatly increased, but the risk of infection of other members of the household is obviated.

In addition to patients recommended by private medical practitioners, numerous applications are made through the sanitary staff, teachers, clergy, private persons, and charitable bodies, with a view to the admission of patients to the Fazakerley or Parkhill Sanatoria. Each case has been specially investigated (usually at the patient's residence) by Dr. Hawksley, and the necessary action taken. In all 1,016 cases have been dealt with in this particular manner during the year.

Admission for all these cases to Corporation Sanatoria was not, of course, possible, having regard to the existing accommodation. Many, however, were admitted, and it was found possible in almost every instance to secure the isolation of the patient either in some other suitable institution, or under greatly improved home conditions.

A considerable amount of useful work has been accomplished in regard to the provision of suitable institutional treatment for children suffering from various stages of pulmonary tuberculosis. The Department is in close co-operation with the Invalid Children's Association and other voluntary bodies interested in the care of ailing children, with the result that a number of children for whom accommodation could not be found at Fazakerley and Parkhill were admitted to suitable institutions elsewhere, such as Delamere Sanatorium, West Kirby Children's Convalescent Home, etc., etc.

The work of medical visitation in connection with "After care" of patients discharged from Fazakerley and other Sanatoria has been continued at intervals during the year, and the results of treatment have been successful in a large number of cases, although relapses were frequent. In a few cases it was possible to arrange for an extension of the period of sanatorium treatment. It is found that among adults, family matters and anxieties are responsible for many premature discharges from the sanatorium.

In respect of the "After-care" of children, the need of the "Open-air Recovery School" continues to be greatly felt. Very few, if any, children are fit to resume attendance at an ordinary elementary school immediately after their discharge from a sanatorium. The contrast between their previous healthy open-air life at the sanatorium, and the conditions prevailing in an average class-room, is too great, and relapse is the result. In view of this, and in the absence of a school specially adapted for them, children discharged from sanatoria are kept at home for a varying length of time, in some cases for twelve months, before they are able to resume attendance at an elementary school. Practically every child discharged from a sanatorium could at once attend an Open-air Recovery School, and so complete the cure established by the sanatorium, if facilities were offered. The loss of education to the child, and of the Government grant in respect of its education, under the present condition of affairs, is not to be lost sight of.

The Medical Officer has repeatedly drawn the attention of the Education Committee to this matter, but no steps have yet been taken to give effect to his recommendations.

SANATORIUM BENEFIT.

The introduction of the "Sanatorium Benefit" clauses of the National Insurance Act on the 15th July, 1912, led to a great increase of the work of the Department. The Consultative Committee (jointly representing the City Council and the Insurance Committee) recommended to the Council the appointment of the Medical Officer of Health as Chief Tuberculosis Officer, with Dr. Hawksley as Acting Chief Tuberculosis Officer. Both proposals were unanimously adopted by the City Council. The Insurance Committee found much of the machinery *re* tuberculosis contemplated by the Insurance Act already in operation, and were promptly able to discharge their liabilities in providing sanatorium benefit.

At an early stage of the negotiations between the Committee and the Council the payment of 25s. per week per insured person admitted to Corporation Sanatoria was sanctioned. The representative of the Local Government Board having inspected Fazakerley and Parkhill Sanatoria, approved of these institutions for the purpose of the Act, and the Port Sanitary and Hospitals Committee commenced to extend their accommodation at both sanatoria in view of the great demand for institutional treatment for this disease.

As soon as possible a provisional Tuberculosis "Dispensary" on the lines laid down by the Departmental Committee on Tuberculosis was established in connection with the Consumption Hospital; the personnel of the Dispensary was composed of the honorary and stipendiary Medical Staff of the Hospital, the Committee of that up-to-date institution doing their utmost to co-operate with the Public Health Department.

Pending the appointment of the necessary clinical Tuberculosis Officers a large number of applicants for "Sanatorium" Benefit were examined and classified at the Consumption Hospital. In appropriate cases "Dispensary" treatment was provided by the same staff. The excellent laboratory facilities of the Hospital admitted of the application of all the recent advances in diagnosis and treatment.

The institution of "Domiciliary" treatment under the Act was facilitated by the existing complete system of home visitation of notified cases of pulmonary tuberculosis by the staff of the Public Health Department. The record of notification enabled cases to be traced readily, and as a result of the action of the Department all cases receiving Domiciliary treatment were placed under conditions as satisfactory as could be expected, having regard to the circumstances of the patients. For example, a complete sanitary inspection of every house occupied by a consumptive is made and defects remedied as far as possible. Thus the patient is placed at once under improved hygienic home conditions, a fact of supreme importance in the home treatment of this disease.

It may be observed here that while residential treatment in a sanatorium is by far the most popular form of "Sanatorium Benefit," a considerable proportion of patients suffering from tuberculosis—essentially a chronic disease—can be efficiently treated either at home or at a "Dispensary," particularly those in the earlier stages of the disease. Each case, however, must be considered on its merits and the decision as to the form of treatment to be followed, is a matter of importance which has been closely attended to. It is hoped that with efficient machinery of detection and the offer of treatment under the Act, cases of pulmonary tuberculosis will, in future, be placed under appropriate treatment at a much earlier phase of the disease than heretofore; whilst admitting that the greatest cause in the decline of the death rate from tuberculosis in Liverpool has been the rapid advance of general sanitation, and particularly the removal of slum property. The appropriate and efficient treatment of individual cases of tuberculosis—in which the value of the sanatorium is beyond question—will still further accelerate the decline.

HOME VISITATION OF NOTIFIED CASES.

The Public Health (Tuberculosis) Regulations, 1908, provide for the notification, within 48 hours, of Tuberculosis of the Lungs, occurring in any person, either an inmate of a Poor Law institution or in receipt of outdoor Poor Law Relief. They also provide that the Medical Officer of Health is to be informed, when the patient is discharged from hospital, of his actual or intended place of destination; and also by the Relieving Officer of any change of address.

The Public Health (Tuberculosis in Hospitals) Regulations, which came into force on the 1st May, 1911, extend notification to cases under treatment in Hospitals generally, including Dispensaries, whilst the further Public Health (Tuberculosis) Regulations, which came into operation on the 1st January, 1912, provide for the compulsory notification, by the Medical Practitioner, of all cases of Pulmonary Tuberculosis.

In December, 1912, the Public Health (Tuberculosis) Regulations, which amend and consolidate the preceding Regulations, were issued by the Local Government Board, to come into operation on the 1st February of the following year (1913). These Regulations apply to Non-Pulmonary as well as to Pulmonary Tuberculosis, and this makes compulsory the notification of diseases which since 1901 have been dealt with in Liverpool under the voluntary system of notification.

Re-visits of
Phthisis
(Home) Cases

In former years the re-visitation of Phthisis cases was undertaken by Special Inspectors, but the increase in the number of cases brought to the notice of the Department, together with other extra duties, has necessitated the whole of the District Sanitary Staff taking part in it. Thus the same Inspector is in contact with the case from the beginning, and as a result, is known to the relatives of the patient, gains their confidence, and is able to obtain without difficulty the necessary information in respect to the patient and an accurate record as to the family history. This system of re-visitation has now been conducted for several years, thousands of visits have been made, and it is satisfactory to note that no complaints have been received, and the visit of the Inspector is in no way resented.

The Inspector advises the patient as to the need for absolute cleanliness, free ventilation of the rooms, and care in dealing with the expectoration, and notes that the general instructions embodied in the instruction cards are being followed.

The re-visits are made as often as the routine duties of the officers will permit, but in view of the large number of cases now under observation, together with the fact that so few of the patients have had the educational advantages resulting from sanatorium treatment, more frequent visitation is desirable.



ILLUSTRATION OF A PLAN ADOPTED BY A CONSUMPTIVE PATIENT TO OBTAIN OPEN AIR
TREATMENT IN HIS GARDEN.

A number of the cases which have been under observation have derived much benefit as a result of Institutional treatment, and, in the case of school children especially, beneficial results have continued. There are instances where the patient has had a relapse after returning home, probably as the result of exposure, unsuitable work, insufficient nourishment, or unsatisfactory conditions in the home. Sanatorium Treatment.

The clauses in the National Insurance Act in respect to the provision of Sanatoria, together with the knowledge of the patient being received at the City Hospitals, has resulted in numerous enquiries indicating a desire to secure admittance for treatment. Many patients who are heads of families or bread winners have refrained from seeking hospital treatment until such time as they are compelled by advancing illness to cease work, and in the case of mothers with young families the same sequence occurs.

Where there is expectoration the sputum is usually placed in the fire, or discharged into the nearest drain. Expectoration

There are a very few cases where a sputum flask is used, as the patients are under the impression that it will interfere with their social privileges and possibly prejudice their position as workers. In a number of cases under visitation there is no expectoration.

Free ventilation of the patient's room, and of the living room in general, is now recognised as being essential, and unless the weather is severe, the need of this precautionary measure is so apparent that little difficulty is experienced in ensuring it, except in those cases where poverty prevents the provision of adequate bedclothing. Ventilation

The fast disappearing insanitary cellars and houses in which some of the patients still live will not permit of adequate ventilation, and as a result, the patient's progress is retarded, and the health of the other inmates is also endangered.

Cleanliness in the home, and of the patient's bed-linen and utensils, is constantly emphasised, and on the whole, is satisfactory. It has been found necessary in a few cases to direct attention to the absence of cleanliness by a formal notice. Cleanliness

Early Diagnosis

There is a neglect or reluctance on the part of many adults to seek medical advice in the early stage of the disease; many treat the early symptoms as an ordinary cold and refrain from further action until graver symptoms prevail.

The medical examination by the School Medical Inspectors has in many instances been the first intimation to the parents that a child required medical treatment.

Isolation

Isolation is now generally recognised as being essential, and, so far as circumstances will permit, is carried out. Only a small percentage of the home cases are confined to bed; with these, however, there is not always suitable accommodation, and occasionally the patient mixes freely with other people.

The majority of the cases are poor people, mainly of the artizan class, or connected with homes in which the income is very limited and irregular.

During the year 1912, 3,331 cases have been under the special observation of the Medical or Sanitary Staffs, 1,549 having been brought forward from 1911.

Of this total, 1,767 were males and 1,564 females. During the year, 476 have died; 41 are not being re-visited by request; 800 removed to new addresses not yet ascertained; 259 were at the time of the last re-visit inmates of various hospitals and institutions, and 1,755 are at present at home.

AGES.

The ages of the patients, together with the percentage in relation to the total number of cases is shown in the following table:—

Under 15 years.	16 to 30 years.	31 to 50 years.	Over 50 years.
1,023 or 30·7%	986 or 29·6 %	1,071 or 32·1 %	251 or 7·5 %

The 3,331 cases dealt with during the year are housed as follows:—

1499 Occupy six-roomed dwellings and upwards.

104 „ five „ „

885 „ four „ „

180 „ three „ „

84 „ two „ „

4 „ one „ „

117 „ two or more rooms in a sub-let house.

146 „ one room in a sub-let house.

56 „ insanitary cellars, shortly to be closed.

57 Reside in insanitary front houses.

199 „ „ „ court houses, many of them now
under the consideration of the Housing Committee.

3,331

FAMILY HISTORY.

In 871 instances a definite record of the previous existence of the disease was given by other members of the family.

The relatives stated to have been previously affected are as follows:—

Father	Mother	Brother	Sister	Husband	Wife	Paternal Relative	Maternal Relative	Other Relatives	TOTAL
239	184	118	90	23	16	86	69	46	871

EXTENT OF ISOLATION OF THE PATIENT.

1,037 Occupy a separate bedroom.

408 „ „ „ bed in room shared by others.

In 1,242 Cases, bed is shared by an adult.

„ 550 „ „ „ „ children.

„ 94 „ „ the patient sleeps in the living room.

3,331

In a very large proportion of these cases the disease is not of the “ open ” variety, and there is no expectoration.

HABITS.

The following tables indicate the result of observations and enquiries into the habits of the patients:—

Over 15 years of Age.

			Temperate	Intemperate	Total
Males	...	...	1,057	183	1,240
Females	...	...	981	87	1,068

CLEANLINESS.

			Clean	Dirty	Total
Males	...	...	1,150	96	1,246
Females	...	...	971	91	1,062

1,023 patients are under 15 years of age.

OCCUPATIONS.

Actors	...	...	...	...	1	Blacksmiths	...	...	...	4
Actresses	...	...	...	...	1	Blue Factory Hand	...	...	...	2
Artificial Flower Makers	...	...	...	...	1	Bobbin Workers	...	...	...	6
Artists	...	...	...	...	1	Boiler Makers	...	...	...	10
Bagmakers	...	...	...	...	19	Boiler Scalers	...	...	...	13
Bakers	...	...	...	...	8	Book Binders	...	...	...	5
Barbers	...	...	...	...	9	Boot Makers	...	...	...	11
Barmen	...	...	...	...	13	Bottlers	...	...	...	5
Bath Attendants	...	...	...	...	1	Bottle Washers	...	...	...	2

OCCUPATIONS.—*Continued.*

Brass Finishers 2	Errand Boys 27
Bricklayers 4	Ex-Policemen 1
Brokers 2	Ex-Soldiers... .. 1
Butchers 6	Factory Hands 2
Cabdrivers 7	Feather Workers 5
Cabinet Makers 11	File Cutters 1
Canvassers 5	Fitters 1
Cap Dressers 2	Firelighter Makers 2
Caretakers 1	Fish Salesmen 1
Carpet Planners 1	Flour Mill Hands 12
Carters 61	French Polishers 5
Charwomen 62	Gardeners 7
Clerks 93	Grocers 6
Coachmen 3	Hawkers 30
Coalheavers 11	Hospital Nurses 1
Commercial Travellers 2	Housewives 595
Confectioners 3	Inspector Disinfecting Staff 1
Coopers 6	Insurance Agents 15
Copper Workers 1	Iron Moulders 4
Cotton Porters 21	Iron Workers 5
Cotton Sorters 5	Interpreters 1
Dental Mechanics 1	Joiners 16
Dock Labourers 267	Knockers-up 2
Domestic Servants 94	Labellers 4
Doorkeepers 3	Labourers 176
Drapers 8	Laundresses 16
Dressmakers 16	Lift Attendants 1
Electricians 5	Lint Workers 1
Engine Drivers 3	Licensed Victuallers 3
Engineers 6	Machinists 6

OCCUPATIONS.—*Continued.*

Marine Firemen	30	School Teachers	3
Marine Store Dealers	3	Seamen	28
Messengers	4	Seamstresses	8
Milk Dealers	2	Ship Stewards	22
Milliners	2	Shopkeepers	10
Newsagents	4	Shop Assistants	28
Night Watchmen	4	Stonemasons	6
No occupation	208	Sugar Boilers	4
Oil Cake Workers	9	Sweet Packers	3
Packers	19	Tanners	3
Packing Case Makers	5	Tailors	17
Painters	31	Tailoresses	13
Paint Mixers	1	Taxi and Motor Men	11
Paper Bag Makers	6	Telegraphists	3
Pattern Makers	5	Tinsmiths	6
Plasterers	9	Tobacco Workers	24
Plumbers	9	Tram Conductors	5
Policemen	3	Tram Drivers	2
Porters (Railway)	19	Tram Inspectors	2
Porters (General)	25	Upholsterers	8
Porters (Fish and Fruit)	4	Vanmen	3
Postmen	4	Waitresses	8
Printers	4	Watchmakers	3
Rag Sorters	1	Warehousemen	10
Rat Catchers	1	Wellsinkers... ..	1
Riveters	1	Window Cleaners	2
Rope Workers	14	Wood Turners	2
Rubber Workers	4	Children under school age	90
Scavengers	9		
School Children	794		
		Total ...	3331

ANALYSIS OF OCCUPATIONS.

Indoor.	Outdoor.	School Children.	Children under School Age.	No Occupation.
1295	944	794	90	208

BIRTH PLACE.

2,899 were born in the City, of the remaining 432 cases 68 were foreigners from various countries, and 364 were born in other British towns, but have been resident in the City for varying periods, ranging from 2 weeks to 40 years (of these, 96 are natives of Ireland).

MEMORANDA IN RESPECT TO SCHOOL CHILDREN.

On December 31st, 1911, there were 432 school children on the re-visit list.

During the year 1912, 454 new cases have been added, making a total of 886 cases dealt with during the year.

ANALYSIS.

47 have died.

5 re-visits are unnecessary, and have been discontinued.

197 have removed from their original addresses and have temporarily been lost sight of.

637 were under observation on December 31st, 1912.

Total 886, 422 of whom were actually in attendance at school.

In 127 instances the child has received the advantage of Sanatorium treatment.

The type of dwelling occupied varies in character and accommodation:

In 527 cases the dwellings are sanitary, being provided with through ventilation, yard space, and separate water-closet accommodation, and are maintained in a fairly clean condition, although the isolation in some cases might be improved.

76 cases are housed in insanitary court houses, or cellars, which will shortly be closed.

In 34 cases, although the house was otherwise sanitary, the accommodation was limited to one room.

ISOLATION.

166 Occupy a separate bedroom.

146 ,, separate bed in a room shared by others.

In 325 cases the patient slept with others.

Total 637

List of Schools attended by Children stated to be suffering from Pulmonary Tuberculosis:—

School.	No. of Children	School.	No. of Children
St. Alban's R.C., Boundary St....	8	St. John's R.C., Sessions Road...	4
St. Alexander's R.C., St. John's Road	1	St. John's C.E., Toxteth	2
St. Alphonsus' R.C., Great Mersey Street	2	St. Jude's C.E., Low Hill.....	2
St. Anne's R.C., Goulden Street	4	St. Lawrence's C.E., Croylands Street	4
St. Anne's C.E., Derby Lane ...	4	St. Malachy's R.C., Beaufort St.	4
St. Anthony's R.C., Kew Street	14	St. Mary's C.E., Kinglake Street	1
St. Augustine's R.C., Stone Street	6	St. Mary's R.C., Lower Milk St.	4
St. Augustine's C.E. Salisbury Street	2	St. Mary's C.E., Rathbone Road	1
St. Benedict's C.E., Kepler Street	3	St. Michael's R.C., York Street	6
St. Bernard's R.C., Kingsley Road	2	St. Nicholas' R.C., Copperas Hill	1
St. Bridget's R.C., Limekiln Lane	7	St. Oswald's R.C., Old Swan.....	2
St. Bridget's C.E., Wavertree ...	1	St. Patrick's R.C., Toxteth	8
St. Chrysostom's C.E., Mill Road	1	St. Paul's C.E., Byles Street.....	1
St. Clement's C.E., Dove Street	5	St. Paul's C.E., Brasenose Road	1
St. Cleopas' C.E., Toxteth	2	St. Peter's C.E., Sackville Street	2
St. Francis Xavier's R.C., Haigh Street	16	St. Peter's R.C., Seel Street.....	5
St. George's C.E., Everton	1	St. Saviour's C.E., Canning Street	6
St. Hugh's R.C., Earle Road ...	2	St. Sebastian's R.C., Lister Road	1
St. James' C.E. Athol Street.....	1	St. Silas' C.E., High Park Street	1
St. John's C.E., Rice Lane	2	St. Simon's C.E., Bronte Street...	2
St. John's C.E., Tuebrook.....	1	St. Stephen's C.E., Smithdown Lane	5

School.	No. of Children	School.	No. of Children
St. Sylvester's R.C. Silvester St.	12	Walton R.C., Rice Lane.....	1
St. Titus' C.E., Portland Street	1	Whitefield Road Wesleyan	1
St. Vincent's R.C., Norfolk Street	9	Addison Street Industrial	1
All Saints' C.E., Gt. Nelson St.	1	Northumberland Street Industrial	2
All Saints' R.C., Oakfield	1	Aspen Grove Higher Grade	1
All Souls' R.C., Collingwood St.	7	Council, Anfield Road	3
All Souls' C.E., Eaton Street ...	1	„ Arnot Street	2
Bankhall Institute	2	„ Ashfield Street.....	2
Bishop Goss R.C., Cazneau Street	8	„ Banks Road	1
Brunswick Wesleyan, Erskine Street	4	„ Beaufort Street	4
Christ Church C.E., Christian St.	1	„ Beetive Street	2
Christ Church C.E., Gt. Homer St	2	„ Birchfield Road	1
Emmanuel C.E., Mill Road	5	„ Brae Street	1
Fairfield C.E., Denman Street ...	4	„ Boaler Street	3
Holy Cross R.C., Fontenoy Street	10	„ Butler Street	7
Holy Trinity C.E., Ashwell Street	1	„ Chatsworth Street	5
Holy Trinity, C.E., Walton Breck	2	„ Clint Road	1
Leyfield R.C., West Derby	4	„ Daisy Street.....	3
National C.E., Garston	2	„ Dingle Lane	8
Private School, 60, Edge Lane ...	1	„ Dovedale Road	1
Our Lady's R.C., Northumber- land Terrace	2	„ Earle Road	6
Our Lady's R.C., Eldon Street...	7	„ Fonthill Road	2
Our Lady's R.C., Chipping Street	2	„ Granby Street	3
Old Church C.E., Moorfields.....	4	„ Granton Road	5
Olive Mount, Wavertree	1	„ Gwladys Street	4
Sacred Heart R.C., Mount Vernon Street	6	„ Heygreen Road	1
South C.E., Cornwallis Street ...	4	„ Heyworth Street	2
The Friary, Bute Street.....	7	„ Harrington	2
Victoria C.E., Seddon Street.....	1	„ Islington	1

School.	No. of Children.	School.	No. of Children.
Couneil, Lawrence Road	2	Couneil, Tiber Street	3
„ Longmoor Lane	3	„ Townsend Lane	6
„ Northeote Road	2	„ Upper Park Street	3
„ North Corporation	4	„ Venice Street	2
„ Penrhyn Street	8	„ Vine Street	1
„ Queen's Road	3	„ Westminster Road.....	4
Council, Rathbone, Albany Rd.	2	„ Walton Lane	2
„ Roscommon Street.....	6	„ Windsor Street	1
„ Salisbury Street	2	Special, Chatham Place	3
„ Sherlock Street	2	„ Dingle Lane	1
„ Soho Square.....	1	„ Whitefield Road	1
„ Steers Street	15		
„ St. James' Road	9	Total	422

Table showing decline in the number of Deaths from
Phthisis and other Tubercular Diseases in the Parish
(Central Districts) of Liverpool

PHTHISIS.

Mortality Rate per 100,000 at all ages.

Year.		Total.		Males.		Females.	
1871-1880	.....	354	.....	390	.....	319	
1881-1890	.....	300	.....	338	.....	261	
1891-1900	... ..	277	.....	325	.....	228	
1901-1910	.....	255	.. ...	333	.....	179	

OTHER TUBERCULAR DISEASES.

Mortality Rate per 100,000 of both sexes at all ages.

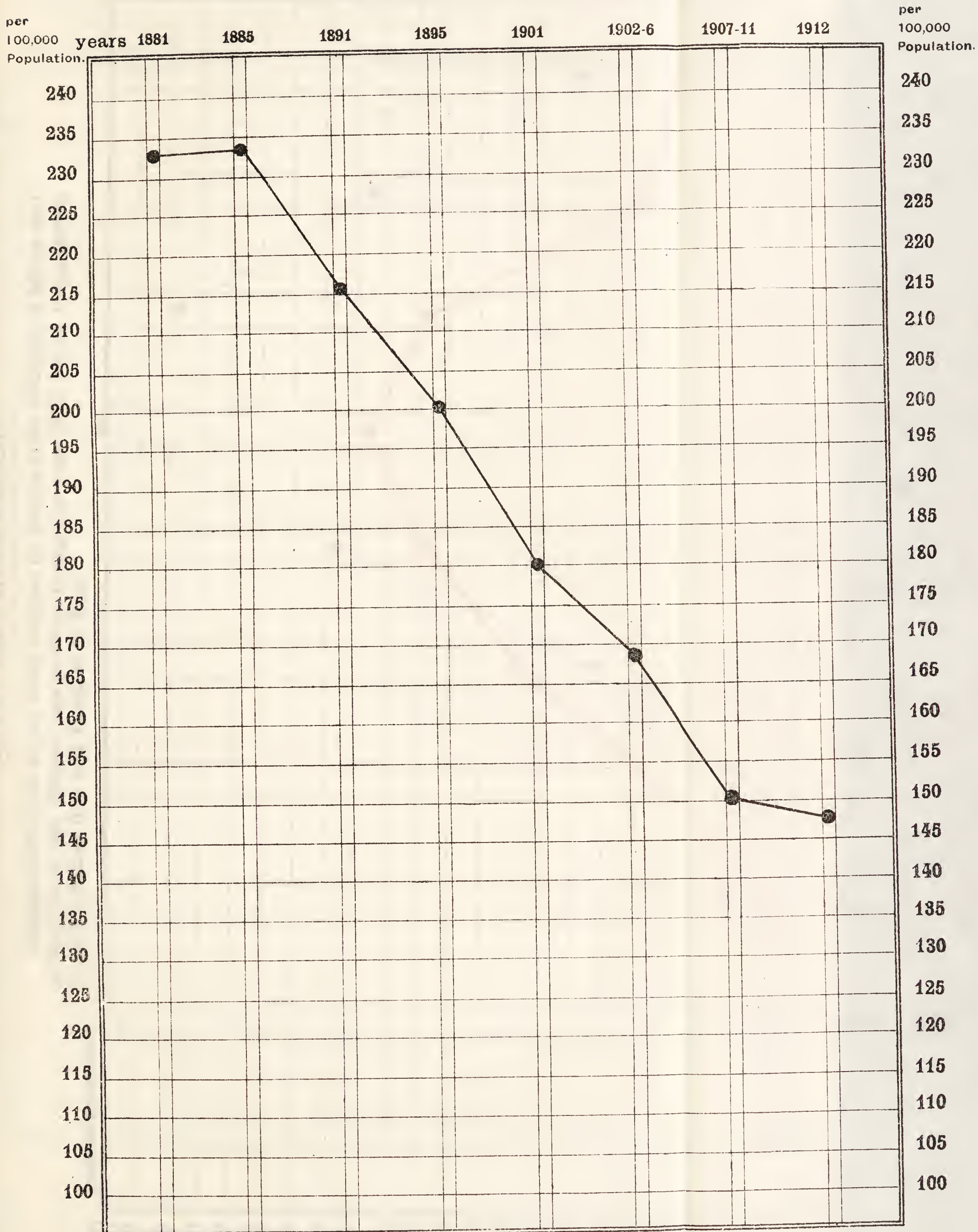
1871	...	...	...	...	...	...	...	87
1881	...	...	...	...	...	...	...	88
1891	...	...	...	...	...	...	...	83
1901	...	...	..	...	...	...	...	75
1911	...	...	...	...	...	...	...	50

TABLE SHOWING PROGRESSIVE DECLINE IN TUBERCULAR
DISEASES DURING THE LAST FOUR DECADES;
DURING THE SEVEN YEARS 1906-12 AND DURING THE
YEAR 1912.

	1866 to 1875.	1876 to 1885.	1886 to 1895.	1896 to 1905.	1906-12.	1912.
Annual Average Death- rate per 100,000 of the population, at all ages, from all forms of Tub- erculosis	430·8	349·8	309·8	247·2	202·5	189·4
Annual Average Death- rate per 100,000 of the population above 5 years of age from Phthisis ...	362·8	278·6	244·4	203·8	170·9	169·2
Annual Average Death- rate per 100,000 of the population below 5 years of age from : Tabes Mesenterica) Hydrocephalus ...) Other forms of Tuber-) culosis.	637·1	597·3	539·1	339·5	236·6	178·5

CITY OF LIVERPOOL.

Death Rates from Phthisis—both sexes, and at all ages—1881-1912.

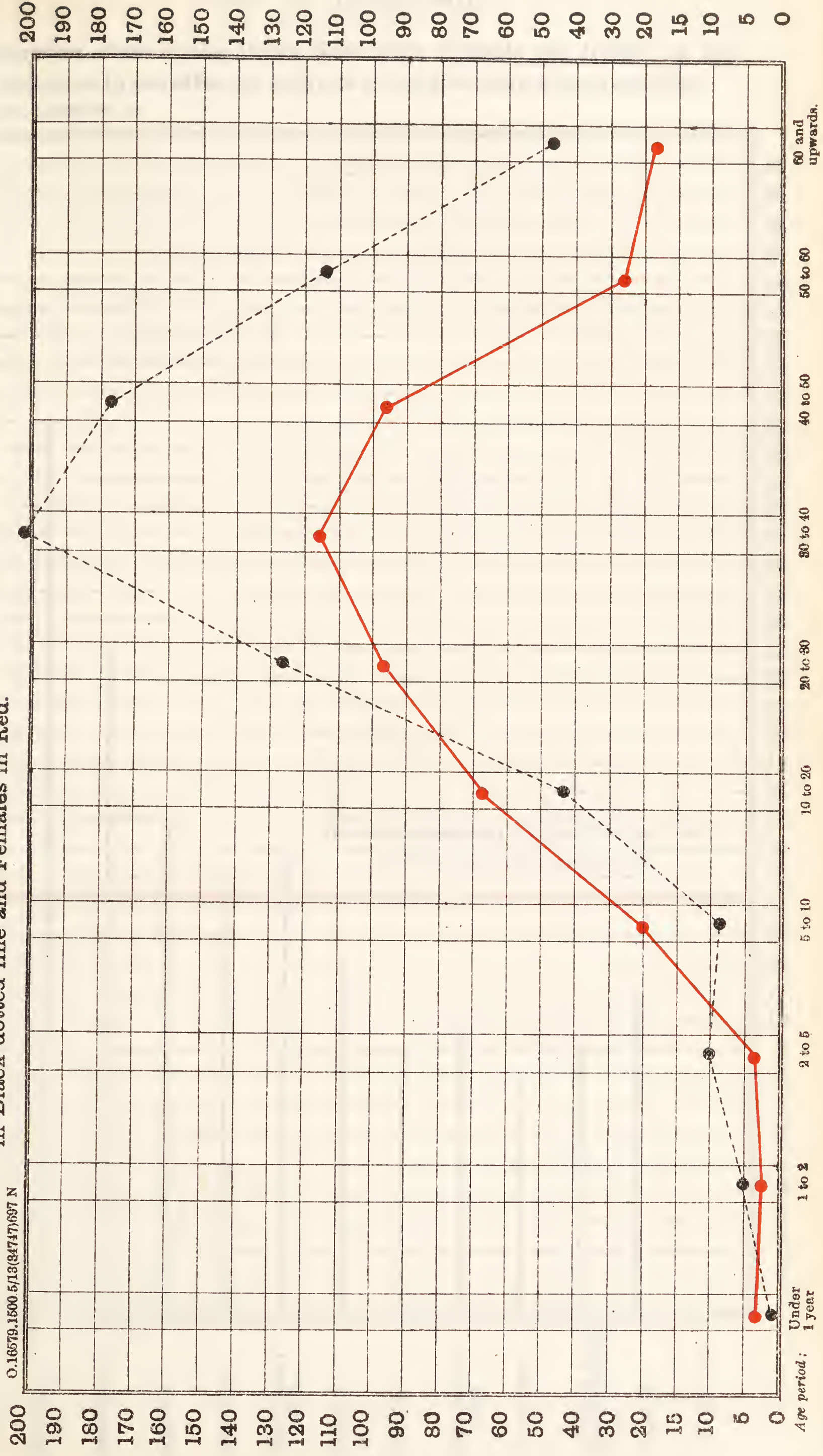


Death Rate from Rheumatism—both sexes, and at all ages 1881-1912



CITY OF LIVERPOOL.

Comparative view of the total number of Deaths from Phthisis of Males and of Females at ten different age periods during the year 1912. Males being shown in Black dotted line and Females in Red.



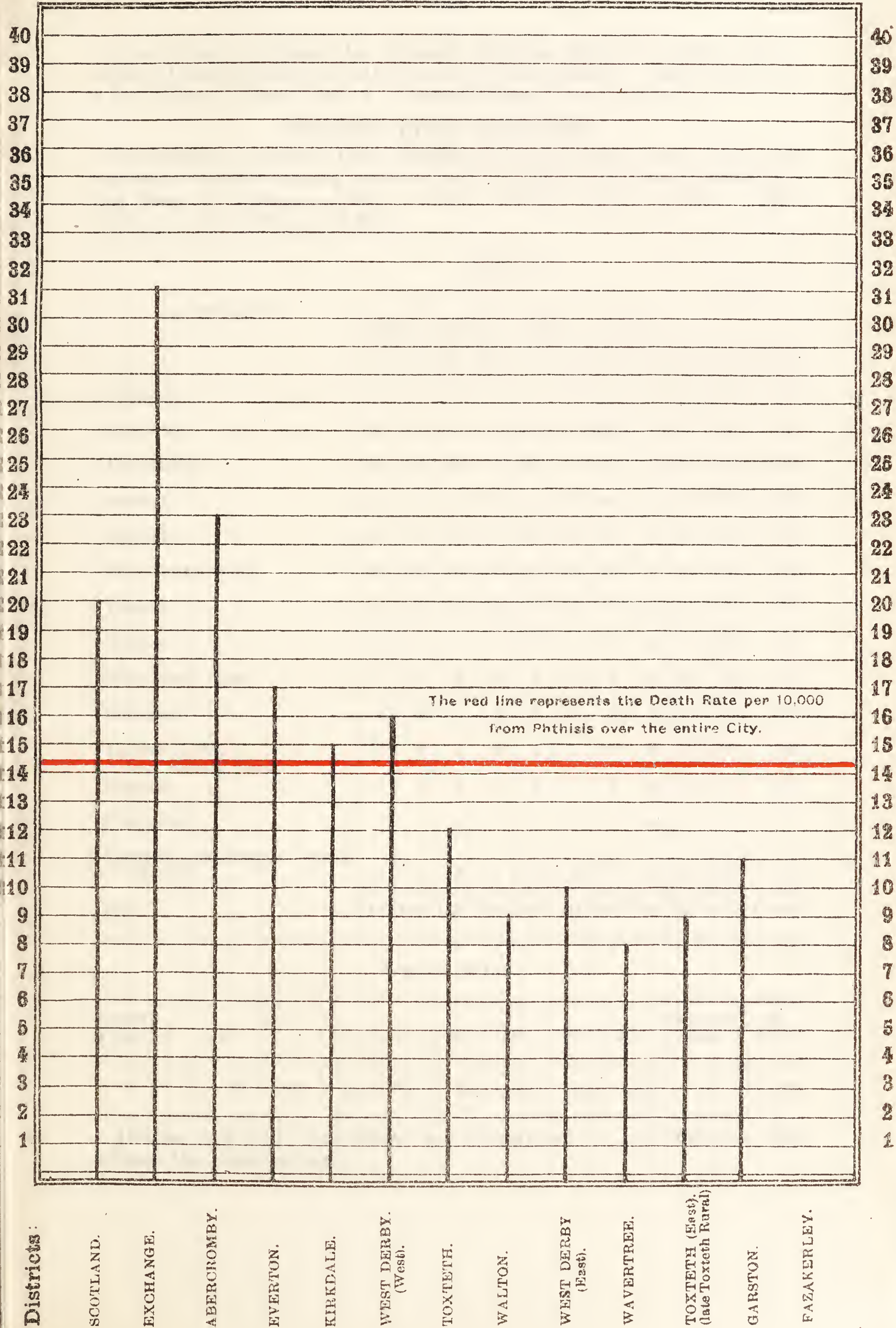
The results of the study are shown in the following table. The data are presented in the form of a line graph showing the percentage of correct responses for each condition. The graph shows that the percentage of correct responses is highest for the condition with the most feedback (100%) and lowest for the condition with the least feedback (0%).



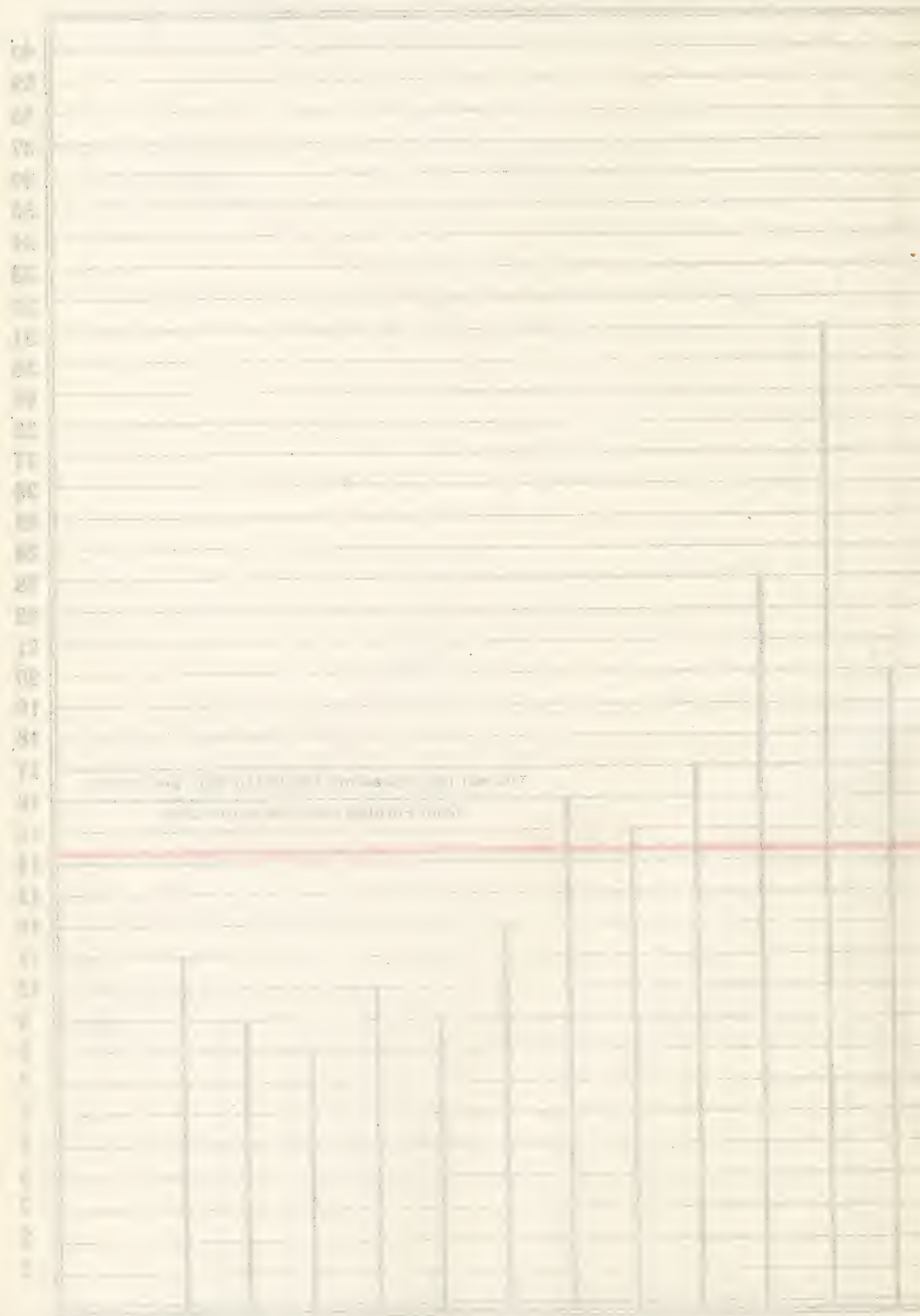
CITY OF LIVERPOOL.

Comparative view of the Death Rate from Phthisis per 10,000 of the Population in the different districts of the City during the year 1912.

O.16624.1500.5/18(34811)697 AA.



Population in the different districts of the City during the year 1917
Comparative view of the 1911 and 1917 figures per 10,000 of pop.



Central
North
South
East
West
City

The Group of Tubercular Diseases includes Phthisis, Tabes Mesenterica, Hydrocephalus, and other forms of Tuberculosis. They occasioned 1,517 deaths in the City of Liverpool during the year 1912.

DEATHS FROM PHTHISIS.

The number of deaths from Phthisis during the year was 1,189. The number of deaths during each of the preceding ten years, 1902-1911, has been as follows:—1,347, 1,258, 1,282, 1,245, 1,235, 1,183, 1,288, 1,116, 1,072 and 1,313.

DISTRICTS.				QUARTERS.								YEAR.		
				March.		June.		Sept.		Dec.				
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Scotland...	...	...	...	20	9	12	9	17	10	8	8	57	36	93
Exchange	...	...	...	21	13	21	6	21	5	20	9	83	33	116
Abercromby	...	...	...	16	6	24	7	20	7	16	5	76	25	101
Everton	...	...	...	35	25	29	20	22	10	44	21	130	76	206
Kirkdale	...	...	...	14	13	16	14	10	10	14	9	54	46	100
West Derby (West)	...	...	...	22	14	15	17	19	10	25	17	81	58	139
Toxteth	...	...	...	25	15	13	14	16	13	17	12	71	54	125
Walton	...	...	...	14	7	9	6	13	4	13	9	49	26	75
West Derby (East)	..	...	...	11	10	6	14	7	6	7	3	31	33	64
Wavertree	...	...	...	5	5	1	8	3	1	8	3	17	17	34
Toxteth (East)	...	...	..	12	6	2	3	4	...	3	2	21	11	32
(late Toxteth Rural)														
Garston	.....			6	3	5	3	7	...	1	3	19	9	28
Fazakerley	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hospitals (Residences outside the City)	...	...	...	17	9	13	7	6	4	17	3	53	23	76
City	...	...	...	218	135	166	128	165	80	193	104	742	447	1,189

AGES AT DEATH.											
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & up-wards.	All Ages.
2	5	13	29	25	86	226	320	274	141	68	1,189

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

NOTIFICATION OF PHTHISIS.

A system of voluntary notification of those cases of consumption in which the services of the Health Department could be of use came into operation on 14th February, 1901.

A special notification form was circulated amongst medical men, and in those cases in which the requirements of the Health Committee were fulfilled, the usual notification fee was paid. Since the inauguration of the system the number of notifications received has been as follows:—

Year.	Males.	Females.	Total.
1901	1148	649	1797
1902	1469	730	2199
1903	1153	721	1874
1904	1068	641	1709
1905	1257	604	1861
1906	1257	662	1919
1907	1446	784	2230
1908	1373	672	2045
*1909	565	403	968
*1910	564	593	1157
*1911	363	358	721

It will be noted that only those cases were notified in which action on the part of the sanitary staff was needed; in many instances the friends of the patient themselves carried out disinfection under the guidance of their medical adviser, but under the Order of the Local Government Board which will come into force on the 1st February, 1913, notification will be received of every case of Tuberculosis and the usual routine inspection and disinfection will follow.

Great advantage has attended the admission of patients to the Fazakerley Hospital (see page 279).

*The reduction in the number of voluntary notifications is due to the large number notified compulsorily under the orders of the Local Government Board.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

These regulations came into force on the 1st January, 1909.

During the year 1912 the cases notified under the Regulations numbered ...	3,630
Of this number	2,493 were duplicates.
Leaving a total of.....	1,137 Cases,
Rooms, Bedding, &c., disinfected in	892 instances.
Bedding, &c., removed for special disin- fection in	127 ,,

The age period at which the greatest number of cases were notified is from 25 years upwards, 582 males and 236 females being notified; 95 males and 66 females were notified between the ages of 15 and 25 years.

Total number of Males notified	745
Total number of Females notified	392

The occupations showing the largest number of cases were as follows—

Labourers	243 Cases.
Firemen (Marine)	16 ,,
Hawkers	15 ,,
Seamen	16 ,,
Carters	24 ,,
Charwomen	16 ,,
Domestic Servants	17 ,,
Bootmakers	13 ,,
Book-keepers	11 ,,

PUBLIC HEALTH (TUBERCULOSIS IN HOSPITALS) REGULATIONS, 1911

These Regulations came into force 1st May, 1911.

During the year 1912, the cases notified numbered	1023
Of this number	63 were duplicates.
Leaving a total of	960 Cases.
Rooms, Bedding, etc., disinfected in	189 instances.
Bedding, etc., removed for special disin- fection in	20 ,,

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1911.

These regulations came into force on the 1st January, 1912.

During the year 1912 the cases notified		
under the Regulations numbered ...	1,686	
Of this number	172	were duplicates.
<hr/>		
Leaving a total of	1,514	Cases.
Rooms, Bedding, &c., disinfected in.....	641	instances.
Bedding, &c., removed for special disin-		
fection in	190	„

The age period at which the greatest number of cases were notified is from 25 years upwards, 559 males and 442 females being notified; 143 males and 155 females were notified between the ages of 15 and 25 years.

Total number of Males notified.....	808
Total number of Females notified.....	706

The occupations showing the largest number of cases were as follows—

Labourers	123	Cases.
Firemen (Marine)	10	„
Hawkers	12	„
Publicans	10	„
Carters	11	„
Charwomen	15	„
Domestic Servants	28	„
Ship Stewards	15	„
Dressmakers	13	„
Book-keepers	60	„

Under these regulations there were also notified, by the School Medical Inspectors, 79 cases, of which 44 were males and 35 were females.

The age period at which the greatest number of cases were notified is from 25 years upwards, 269 males and 256 females being notified; 90 males and 73 females were notified between the ages of 15 and 25 years.

Total number of Males notified	493
Total number of Females notified	467

The occupations showing the largest number of cases were as follows:—

Labourers	63 Cases.
Firemen (Marine)	7 „
Charwomen	10 „
Domestic Servants	18 „
Hawkers	7 „
Book-keepers	11 „
Seamen	9 „

INFORMATION ON CONSUMPTION.

A card containing information for consumptive people and those who live with them has been widely circulated during the past twelve years.

A copy of this information has appeared in previous reports.

The accompanying diagrams illustrate the changes which have been taking place with regard to phthisis during the last twenty to thirty years:—

- (a) In the City of Liverpool;
- (b) In England and Wales;
- (c) In Scotland;
- (d) In Ireland.

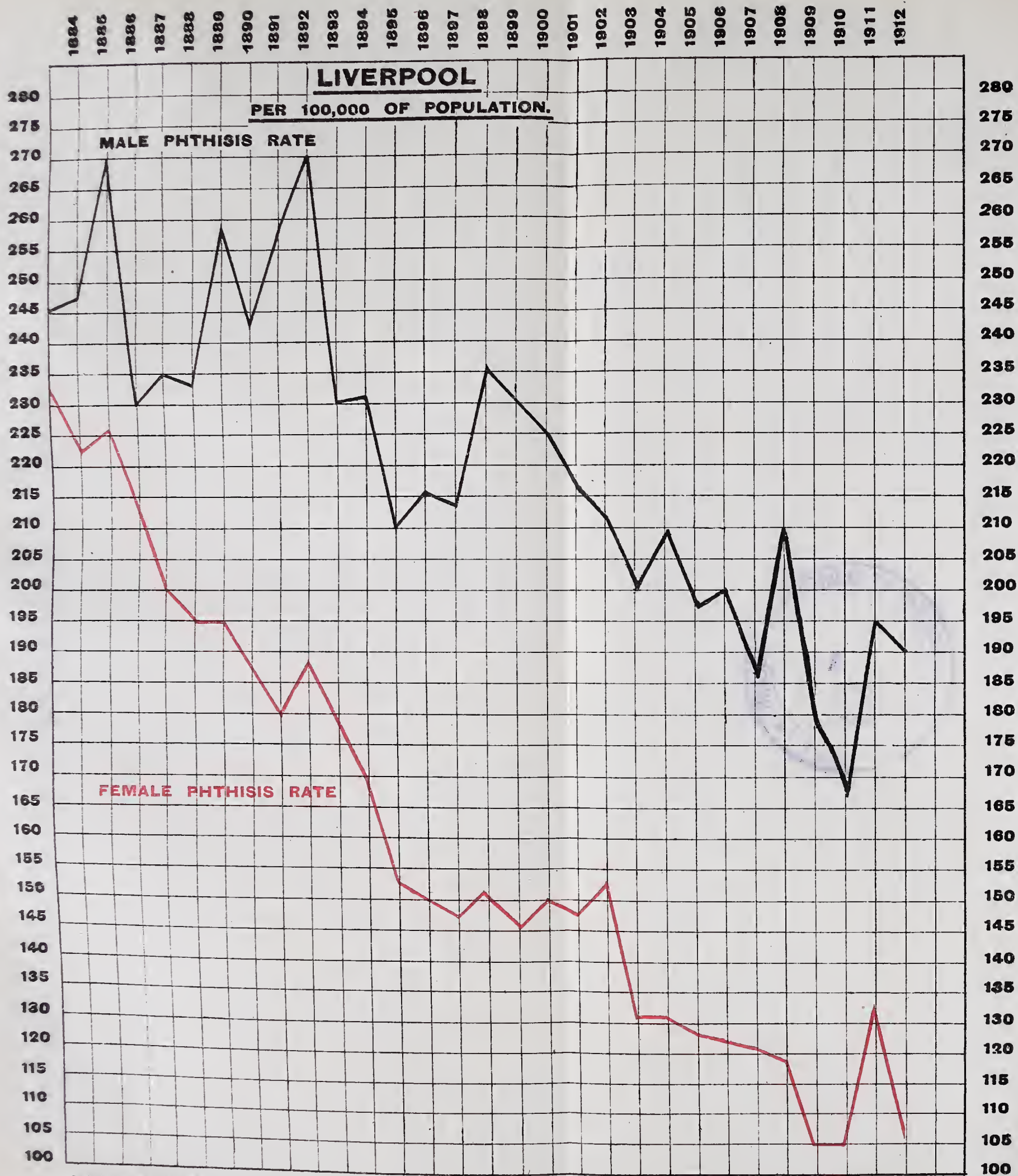
It will be seen that the decline has been marked in both sexes, but much more so in the female than in the male.

DEATHS FROM OTHER TUBERCULAR DISEASES.

Viz.:—Tabes Mesenterica, Hydrocephalus, and other forms of Tuberculosis.

DISTRICTS.					Tabes Mesenterica.		Hydrocephalus.		Other forms of Tuberculosis		YEAR.		
					M.	F.	M.	F.	M.	F.	M.	F.	T.
Scotland	...	...	...	...	1	2	9	4	7	4	17	10	27
Exchange	...	...	...	...	1	2	3	2	8	7	12	11	23
Abercromby...	...	...	...	...	3	5	3	5	10	7	16	17	33
Everton	...	...	...	...	9	8	8	9	13	17	30	34	64
Kirkdale	...	...	...	...	4	3	7	2	4	1	15	6	21
West Derby (West)	...	...	...	...	6	...	12	9	6	5	24	14	38
Toxteth	...	...	...	...	15	3	5	6	7	9	27	18	45
Walton	...	...	...	...	4	2	6	6	1	5	11	13	24
West Derby (East)	...	...	...	...	2	1	1	4	5	6	8	11	19
Wavertree	...	...	...	...	...	1	2	2	...	1	2	4	6
Toxteth (East)	...	...	...	...	...	1	2	...	2	...	4	1	5
(late Toxteth Rural)	...	...	...	...	...	...	...	...	...	...	...	...	...
Garston	...	...	...	...	...	...	1	1	4	...	5	1	6
Fazakerley...	...	...	...	...	...	...	...	...	...	1	...	1	1
Hospitals (Residences outside the City)	...	...	...	...	1	1	3	2	7	2	11	5	16
City	...	...	...	...	46	29	62	52	74	65	182	146	328
AGES AT DEATH.													
Under 1 year.	1—	2—	5—	10—	15—	20—	30—	40—	50—	60 & up- wards.	All Ages.		
51	47	72	43	24	22	22	16	16	7	8	328		

Deaths in Public Institutions are transferred to the Districts from whence the patients came.

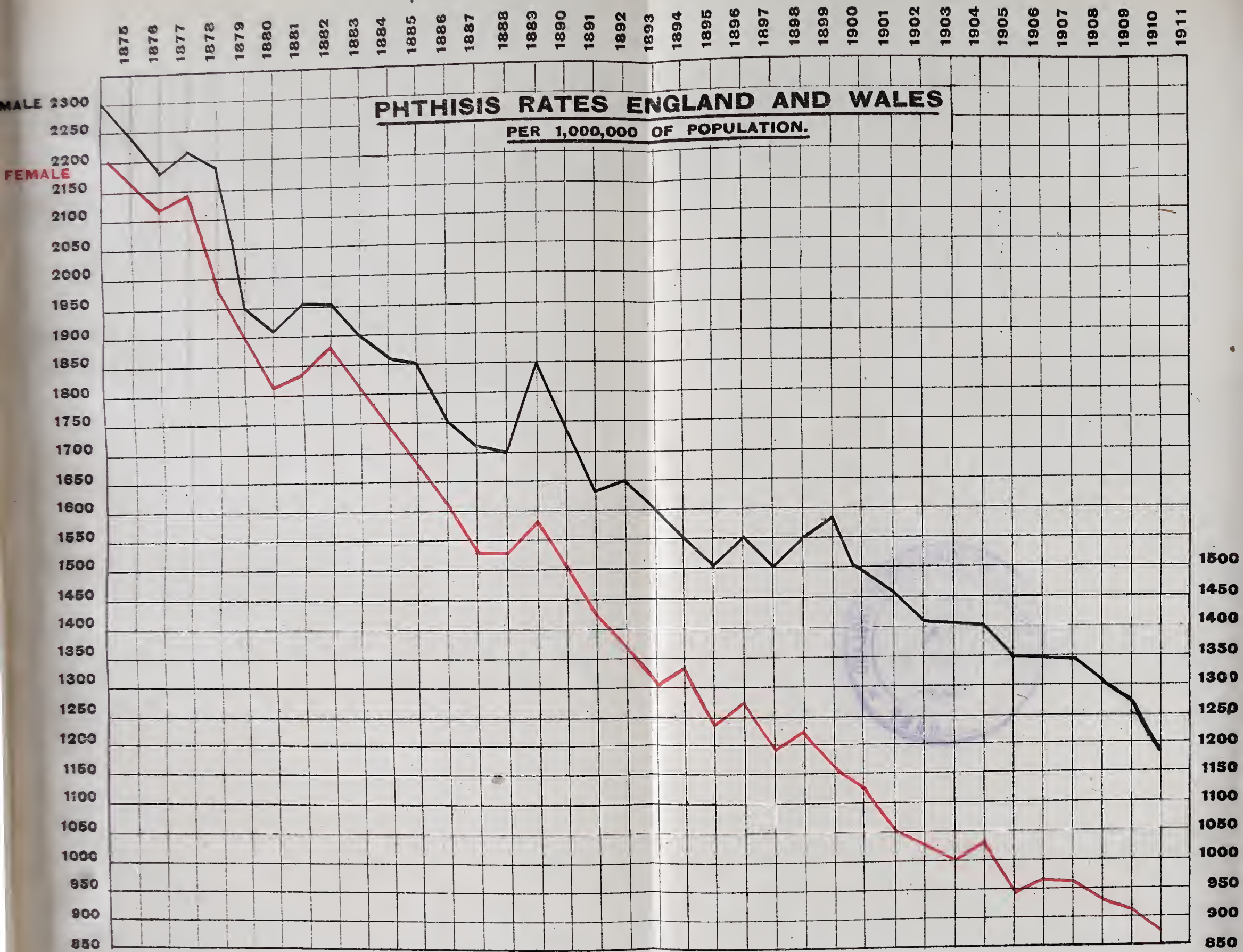


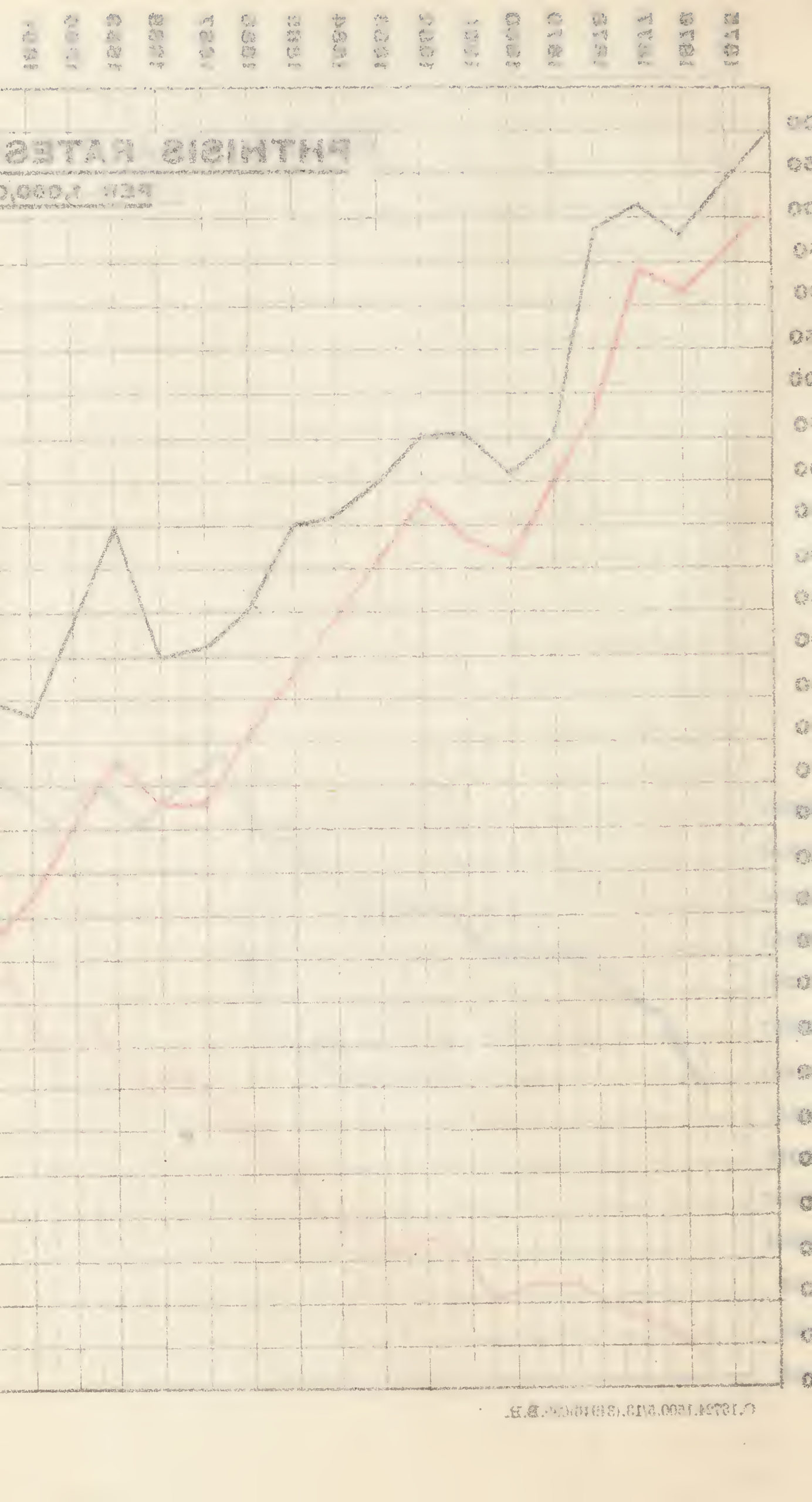
LIVERPOOL

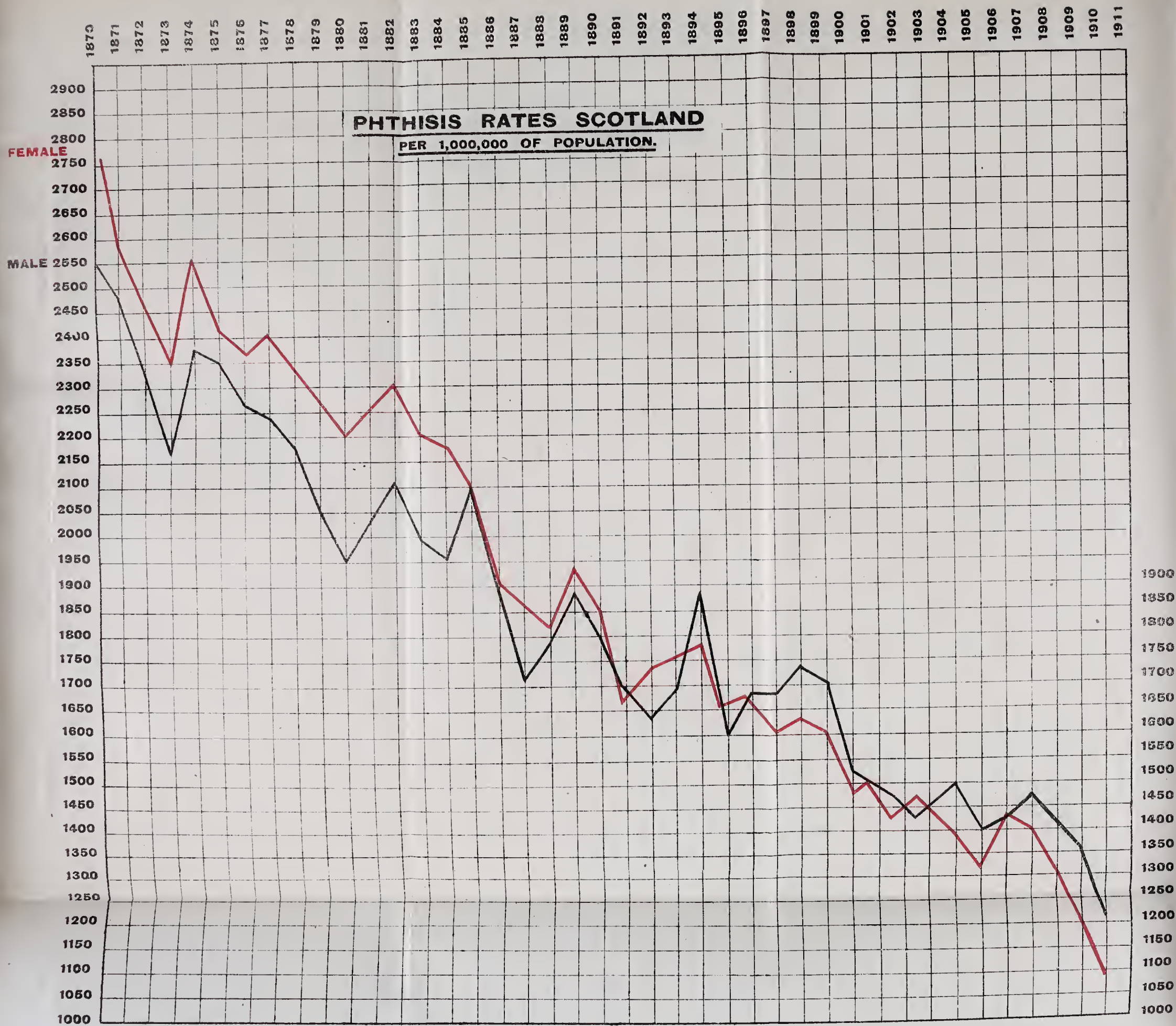
PER 100,000 OF POPULATION

MALE FERTILITY RATE

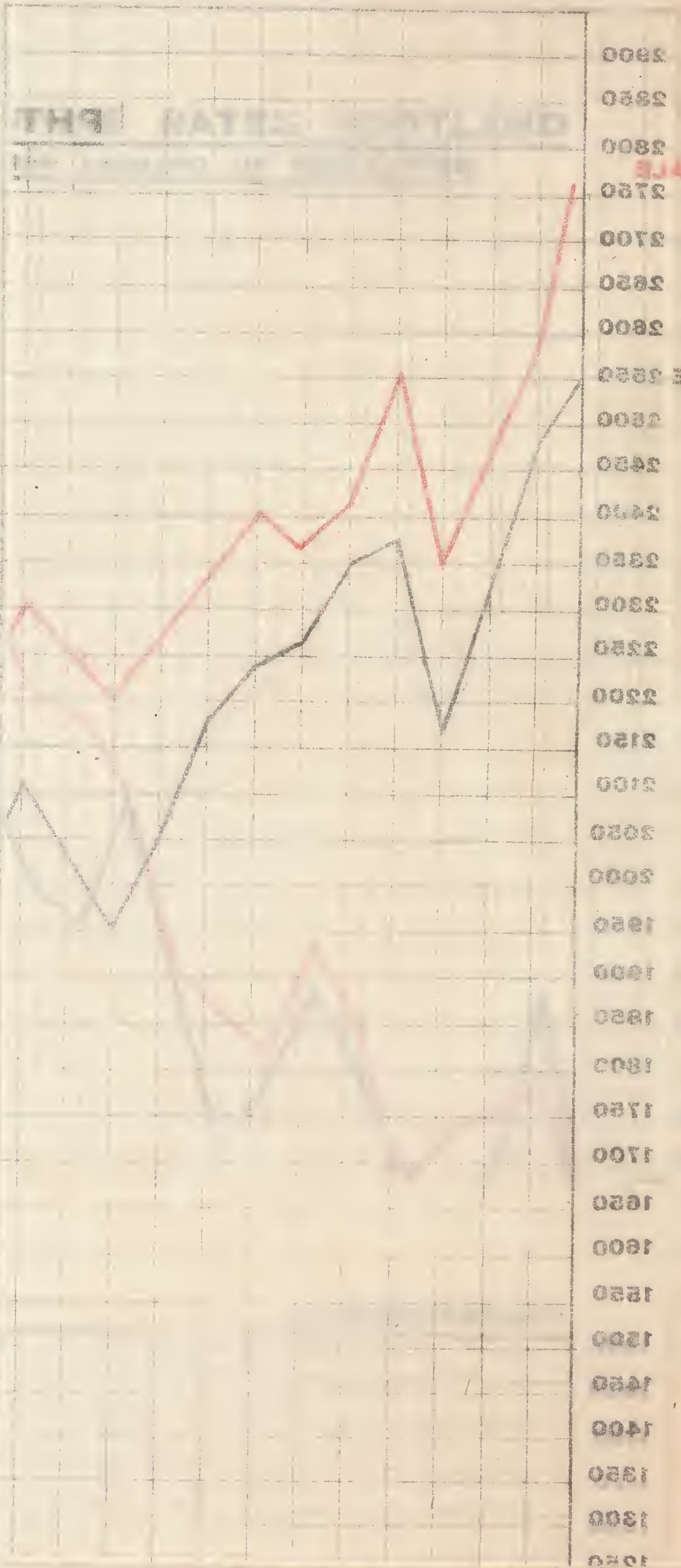




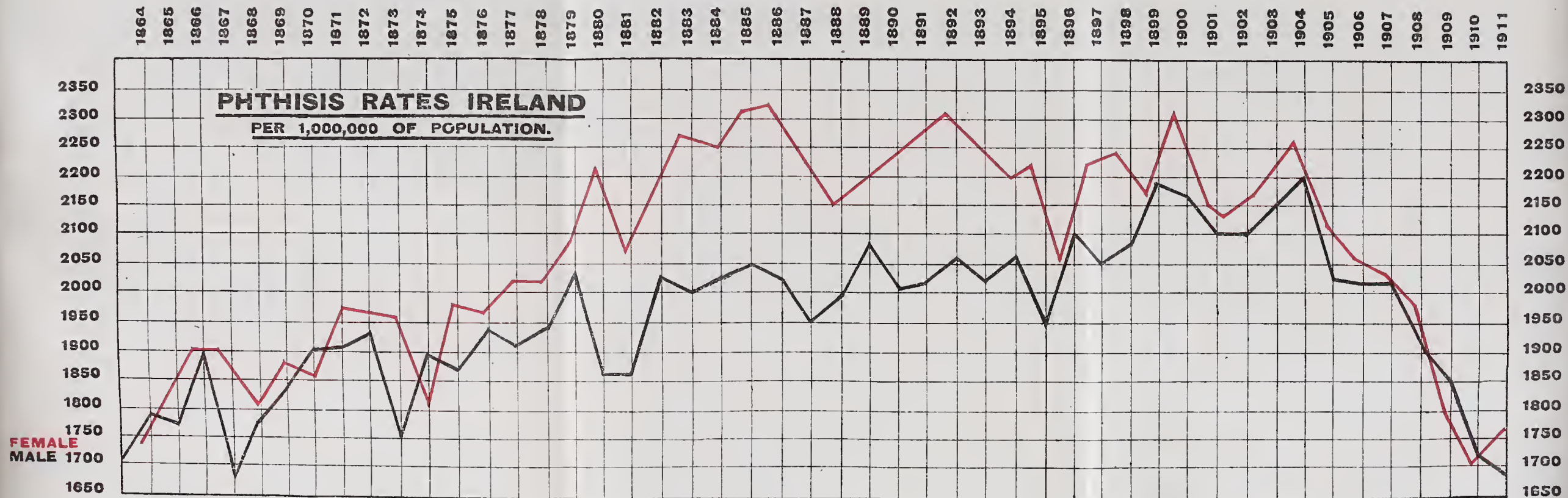


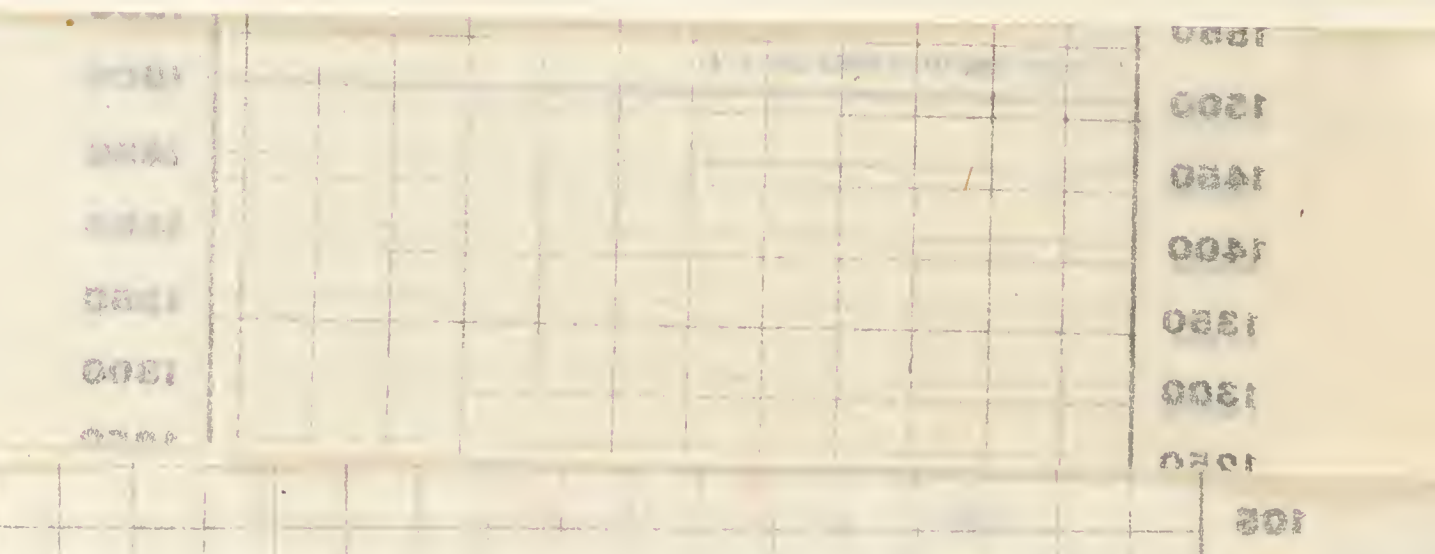
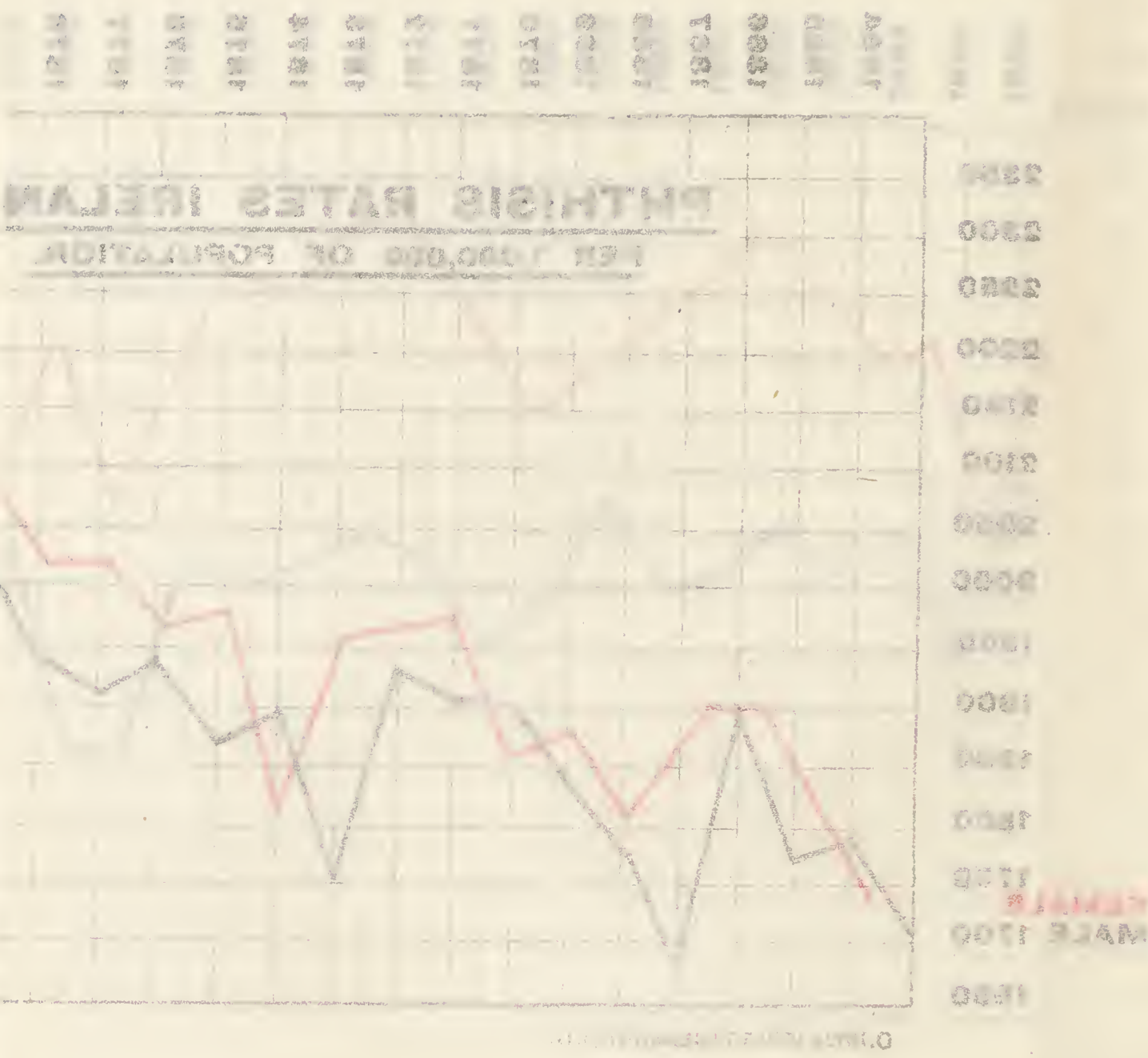
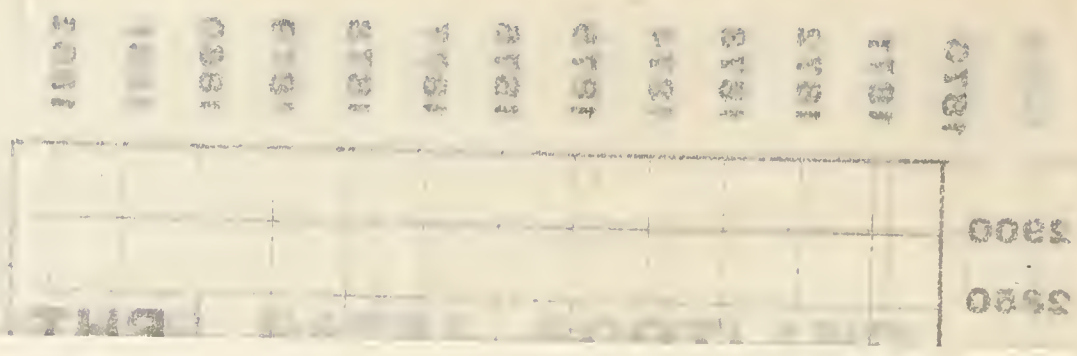


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1101
5121
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5171
5181
5191
5201



v





ACUTE POLIOMYELITIS (INFANTILE PARALYSIS).

This disease became notifiable in the City of Liverpool on the first of January, and twenty-five cases were reported during the year. Ten of these occurred in a comparatively small area in the south-east of the City. The remainder of the cases were more evenly distributed throughout the City. The incidence varied from 7·5 cases per 100,000 population in Wavertree District, and 5·8 in Toxteth East and West Derby West, to nil in Exchange, Abercromby and Fazakerley.

In one case the patient was apparently infected during her stay in Ireland. In only two cases was there a common association, direct or indirect, with any particular school. If the cases are arranged by date of onset, it will be seen that there is a marked increase of infection in the month of August. The disease is almost confined to the period May to September.

	By date of onset.
January, February and March.....	0
April	1
May	4
June	3
July	3
August	9
September	3
October	1
November	0
December	1
	—
	25
	—

ANTHRAX.

There has been a considerable reduction in anthrax during recent years in Liverpool. The disease was made compulsorily notifiable in this city in 1910, and by the circulation of information regarding its nature and the need for prompt treatment, much good has resulted.

Cases of this disease still continue to occur from time to time, and point to the need for dealing carefully with imported animal products, e.g., hides and wool. These imports are liable to be contaminated, and so convey disease to men handling them; or the infected materials may contaminate other food stuffs, e.g., cattle foods on ship-board, and so transmit the disease to animals. During the year six cases occurred in men directly infected by handling imported materials, and two butchers contracted anthrax whilst slaughtering animals subsequently found to be suffering from that disease.

The following table shows the cases of anthrax reported during the past three years:—

CASES OF ANTHRAX REPORTED DURING THE YEARS 1910, 1911 and 1912.

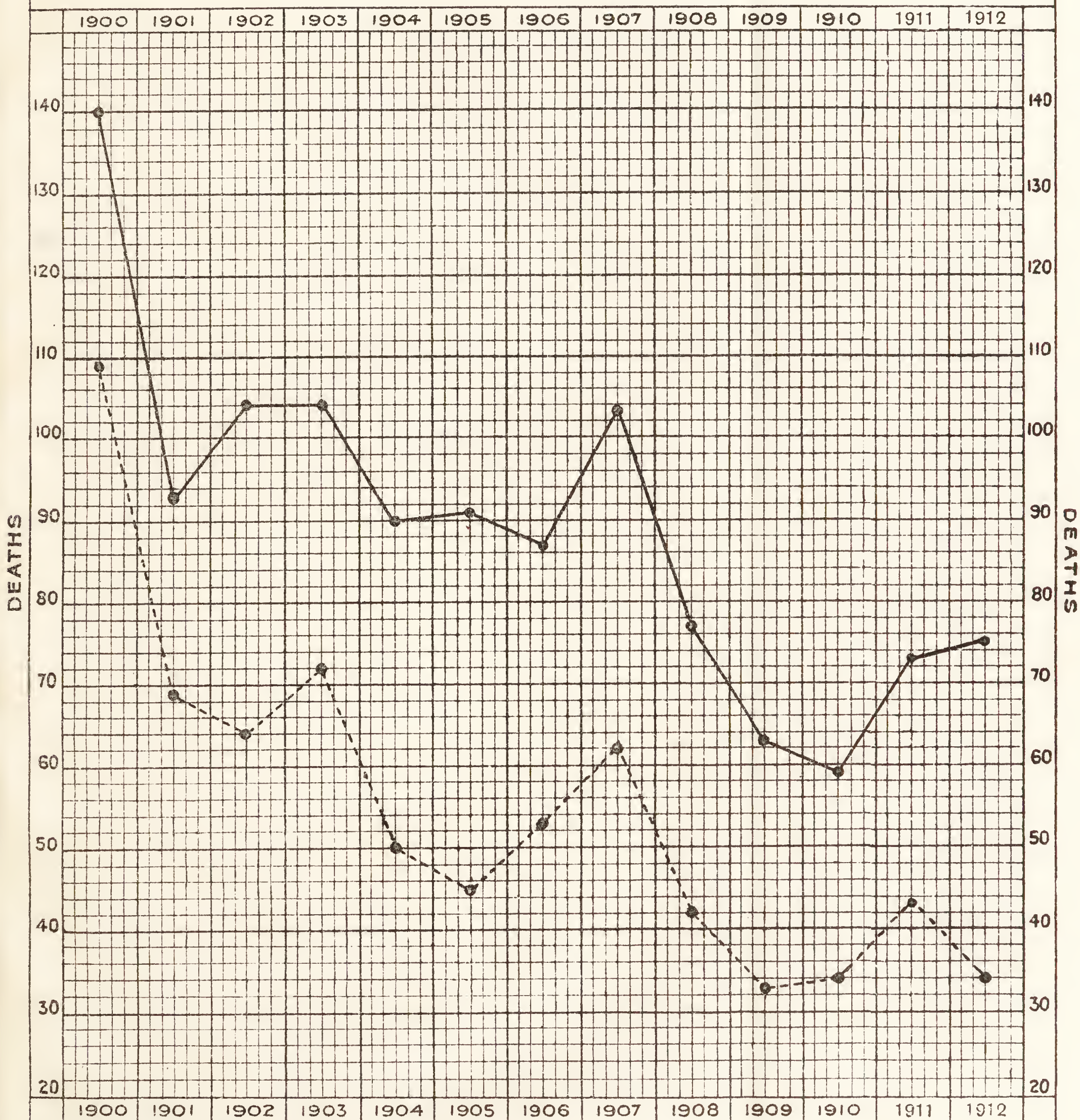
Date.	Sex.	Occupation.	Material.	Origin of Material.	Situation of Pustule.	Severity and Result.	Information Obtained.
1910. February 5	M	Dock Labourer	Hides and Goat Skins	Bombay	Neck	Death	Gloves provided
February 15	M	Dock Labourer	Goat Hair.....	East India	Upper Lip	Recovery	Gloves provided
February 27	M	Wool Ware- houseman	Wool	Unknown	Cheek	Recovery	Gloves provided
March 16	F	Bag Mender	Bags contained Egyptian Bones	Egypt	Lower Neck	Death	No Gloves
May 26	M	Wool Sampler	Goat Hair.....	Karachi.....	Lower Arm	Recovery	No Gloves
July 16	M	Dock Labourer	Bone Meal	India	Fore Arm	Recovery	No Gloves
July 29	F	Wool Packer	Wool	East India	Neck	Recovery	No Gloves
September 22	M	Dock Labourer	Goat Skins and Cow Hides	India	Neck	Recovery	Gloves provided
October 12	M	Dock Labourer	Unknown	Unknown	Cheek	Recovery	Gloves provided
November 7	M	Dock Labourer	Wool and Skins	East India and Russian Ports	Cheek	Recovery	Gloves provided
1911. March 29	F	Wool Sorter	Wool	Bombay	Cheek	Recovery	Bacilli cultivated from the wool

Date.	Sex.	Occupation.	Material.	Origin of Material.	Situation of Pustule.	Severity and Result.	Information Obtained.
1911. July 18	M	Hide Scraper ...	Hides.....	Madagascar and Cape of Good Hope	Left Neck	Recovery	
September 30	M	Dock Labourer	Dry Hides	China.....	Left Cheek	Recovery	Gloves and Overalls
November 30	M	Wool Ware- houseman	Wool	Persia	Neck	Death	
1912. February 1	M	Labourer	Dry Hides	Abyssinia and Mombassa	Neck	Recovery	Gloves provided but not worn
February 11	M	Butcher.....	Slaughtered a Diseased Animal	—	Fore Arm	Recovery	
February 27	M	Labourer	Dry Hides	Singapore	Neck	Recovery	
March 16	M	Labourer	Hides.....	Africa, East Coast	Neck	Recovery	Gloves provided
March 19	M	Dock Labourer	Wool	Unknown	Cheek	Death	No Gloves used
May 8	M	Wool Ware- houseman	Wool	Karachi.....	Forehead	Recovery	
September 14	M	Dock Labourer	Dry Hides	Bathurst	Left Side	Recovery	Gloves provided
November 26	M	Employed by Dairyman	Slaughtered a Diseased Animal	—	Right Wrist ...	Recovery	

CITY OF LIVERPOOL.

DEATHS FROM EXCESSIVE DRINKING DURING THE 13 YEARS 1900 TO 1912.

The Black Line denotes Males and the Dotted Lines Females.

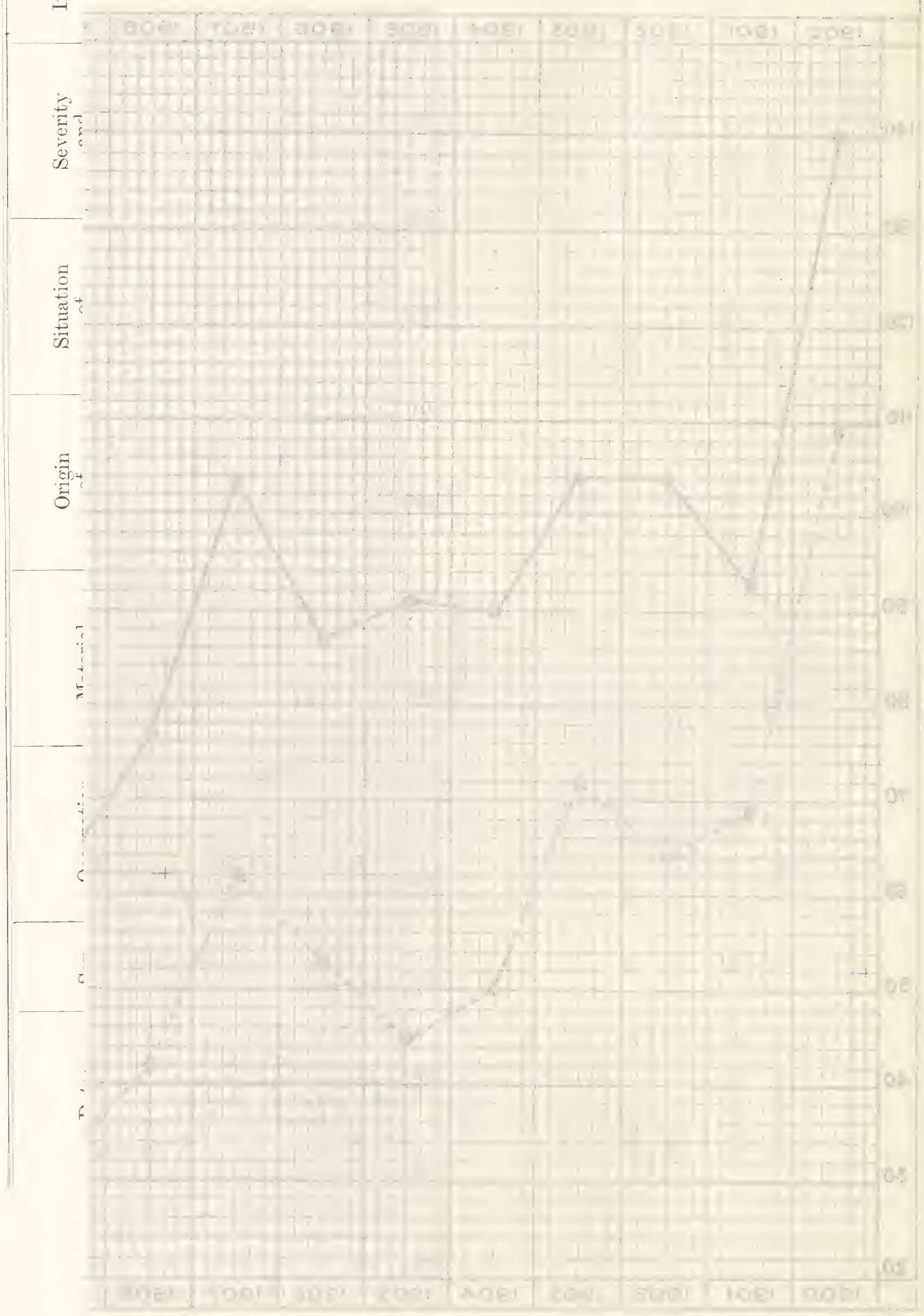


CITY OF LIVERPOOL

DEATHS FROM EXCESSIVE DRINKING THE 15 YEARS 1900 TO 1915.

Information
Obtained

The Death Rate from Excessive Drinking and the General Situation



DEATHS

ALCOHOLISM.

The total number of deaths certified by Coroner's Juries to be the result of excessive drinking is 107, the number in the previous year being 114.

Forty-seven of these deaths occurred in the first six months of the year and 60 in the second six months. Seventy-four were males and 33 females.

In addition to the foregoing, six men and four women were fatally injured whilst under the influence of drink; one man, aged 55, poisoned himself with carbolic acid, taken inadvertently, death being accelerated by excessive drinking; and one man, aged 43, cut his throat whilst suffering from an attack of delirium tremens. In two inquests death was found to be the result of violence—in one case the person committing the deed was under the influence of drink, and in the other case both the person who inflicted the injuries and the injured person were under the influence of drink at the time.

“Alcoholism” is certified to be the cause of death of three men and six women.

It has many times been pointed out that the number of deaths does not indicate the extent of the mischief caused by excessive drinking.

A comparison of three Districts in regard to the general death-rate, the proportion of deaths due to excessive drinking, and the proportion of deaths which take place in Workhouses and Hospitals, shows what proportion of the population in times of sickness are dependent upon charitable aid.

	Population.	General Death-rate per 1,000.	Proportion of Deaths in Workhouses and Hospitals.	Proportion of Deaths due to Excessive Drinking.
Exchange	37,345	28·7	55·3 per cent.	1·7 per cent.
Walcott	76,938	11·5	24·6 „	·2 „
Wavertree	42,272	11·3	25·5 „	·4 „

The circumstance that many of the broken down and unfortunate classes from various localities drift into the lodging-houses in Exchange District, and so pass on into Workhouses, will not be lost sight of.

CANCER.

The following table indicates the number of deaths from Cancer during the last five years, and the part of the body affected:—

DISEASE.	1908.			1909.			1910.			1911.			1912.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Cancer of Stomach and Bowels..	150	132	282	135	149	284	169	132	301	176	149	325	195	142	337
“ Liver	23	37	60	33	55	88	46	48	94	32	51	83	31	53	84
“ Urinary and Genera- tive Organs	21	111	132	4	121	125	29	112	141	17	104	121	26	118	144
“ Breast.....	1	51	52	...	53	53	...	60	60	...	58	58	...	54	54
“ Head and Face	29	9	38	24	8	32	22	3	25	18	3	21	21	6	27
“ Tongue, Neck, and Throat.....	51	6	57	61	6	67	55	10	65	61	4	65	70	7	77
“ Other parts of the Body	14	7	21	21	6	27	11	19	30	17	12	29	18	11	29
“ Parts not specified ...	9	7	16	9	9	18	10	19	29	8	16	24	10	7	17
Total	298	360	658	287	407	694	342	403	745	329	397	726	371	398	769

FEVER AND DIARRHŒA MORTALITY.

The following table shows the death-rate per 1,000 of the population, and the number of deaths from Fever and Diarrhœa during the last thirty years:—

Year.	*Death Rate per 1,000 of Population from all causes.	Deaths from Diarrhœa.	Deaths from Fever.		
			Typhus.	Typhoid.	Continued.
1883	27·7	541	408	108	24
1884	26·6	841	77	112	16
1885	25·6	422	71	95	16
1886	26·1	781	47	140	11
1887	26·4	619	52	130	12
1888	23·1	431	32	125	4
1889	24·9	575	45	167	...
1890	27·5	468	23	99	1
1891	26·8	330	37	92	2
1892	24·4	415	18	111	2
1893	26·7	866	44	221	5
1894	23·1	503	50	248	7
†1895	24·8	1,108	24	197	4
1896	21·4	851	36	166	2
1897	22·8	1,482	23	145	5
1898	22·2	956	19	148	5
1899	24·1	1,158	13	182	4
1900	23·1	900	11	120	4
1901	21·6	1,269	14	154	3
†1902	21·7	611	25	190	2
†1903	20·0	657	57	108	...
1904	22·1	1,785	25	82	1
§1905	19·5	960	28	49	1
1906	20·6	1,298	8	85	1
1907	18·7	544	18	92	...
1908	18·9	630	10	73	2
1909	18·8	514	8	54	...
1910	17·9	540	...	42	...
1911	19·5	¶1645	5	36	1
1912	17·7	|| 509	2	23	—

* Calculated on corrected population as per Census Returns of 1891, 1901 and 1911.

† City Boundaries extended. ‡ Garston included. § Fazakerley included.

¶ Including 333 from Enteritis under 2 years of age.

|| „ 230 „ „ „ „ „

Mr. Plummer, M.A., F.R.A.S., Astronomer to the Mersey Docks and Harbour Board, has kindly furnished the following tables relating to Meteorological observations made by him at the Liverpool Observatory, Bidston :—

LIVERPOOL OBSERVATORY, BIDSTON, BIRKENHEAD.

Latitude $53^{\circ} 24' 5''$ N. Longitude $3^{\circ} 4' 20''$ W.

Height above the Mean Level of the Sea 202 feet.

1912.	Barometer. Mean.	Temperature. Mean.	RAINFALL.		Mean Humidity of the air (Complete Saturation equal 100).
			Amount.	No. of days on which .01 in. or more fell.	
	Inches.	Degrees.	Inches.		
January	29.897	38.3	3.695	17	84
February	29.616	41.6	1.092	15	86
March	29.615	44.7	3.609	22	82
April	30.173	49.1	0.202	3	70
May	29.978	52.8	1.595	13	75
June	29.788	57.0	2.348	21	75
July	29.937	60.5	3.506	17	74
August	29.705	55.4	5.862	27	85
September	30.183	52.5	1.166	13	78
October	29.879	48.2	2.923	15	82
November	29.975	45.0	2.155	20	84
December	29.784	45.1	2.017	26	83

DIFFERENCE FROM THE AVERAGE QUANTITIES OBSERVED DURING THE
LAST 45 YEARS.

1912.	BAROMETER.		TEMPERATURE.		RAINFALL.	
	Above Average.	Below Average.	Above Average.	Below Average.	Above Average.	Below Average.
	Inches.	Inches.	Degrees.	Degrees.	Inches.	Inches.
January .....	...	0·057	...	0·9	1·560	...
February .....	...	0·318	0·4	...	...	0·601
March .....	...	0·278	2·5	...	1·814	...
April	0·276	...	1·8	...	...	1·443
May	0·014	...	1·0	...	...	0·310
June .....	...	0·198	...	0·4	0·223	...
July .....	...	0·011	...	0·3	0·829	...
August .....	...	0·211	...	5·1	2·824	...
September	0·221	...	...	3·7	...	1·632
October.....	0·008	...	...	1·3	...	0·573
November	0·083	...	1·8	...	...	0·422
December.....	...	0·067	5·2	...	...	0·618

OBSERVATIONS OF VELOCITY OF WIND.

1912.	Average Hourly Velocity for Month.	Maximum Hourly Velocity.	Date.	Minimum Hourly Velocity.	Date.
	Miles.	Miles.		Miles.	
January	14·8	49	Jan. 5	1	January 1, 18, 24, 29, 30.
February....	16·5	59	Feb. 27	1	February 14, 15, 18.
March.....	17·9	54	March 29	0	March 11.
April	15·6	67	April 8	1	Apr. 12, 13, 15, 18, 19, 25, [30.
May	12·7	44	May 16	1	May 1, 10, 14, 18, 29, 30.
June	13·5	43	June 15	1	June 2, 7, 8, 12.
July	13·1	35	July 29	1	July 7, 16, 26.
August	15·6	56	Aug. 1	0	August 25.
September..	17·7	48	Sept. 5	1	September 12.
October.....	14·0	37	Oct. 26	0	October 11.
November...	18·4	63	Nov. 10	1	November 1, 14, 27.
December...	21·3	58	Dec. 24	1	December 22, 27.

SANITARY ADMINISTRATION.

SANITARY ADMINISTRATION.

For the purpose of carrying out the requirements of the various Sanitary Acts of Parliament and the Orders, Bye-laws, and Regulations made thereunder, the following staff of the Medical Officer of Health's Department has been employed during the year:—

	Males.	Females.
*Chief Sanitary Inspector	1	—
*Deputy Chief Sanitary Inspector	1	—
*Prosecuting Sanitary Inspectors	8	—
*Inspectors for General Sanitary Purposes	32	22
(The Female Inspectors also assist at the Medical Inspection of School Children, and visit the homes where births have been notified under the Notification of Births Act, &c.)		
||*Inspector of Midwives	—	1
* ² Inspector for Ophthalmia Neonatorum	—	1
Assistants at Humanised Milk Depôts	1	11
§Inspectors of Meat and Animals	5	—
Inspectors under the Diseases of Animals Act	1	—
(The six Port Sanitary Inspectors also assist in carrying out the provisions of this Act.)		
**Inspectors of Fish and Fruit	4	—
* „ under the Sale of Food and Drugs Act	3	—
* „ „ „ Shops Acts, and Employment of Children Act	2	1
* „ of Workshops, Workplaces, and Bake-houses	4	—
(These Inspectors are also appointed under the Shops Acts, and the Employment of Children Act.)		
†Smoke Inspectors	3	—
***Inspectors of Common Lodging and Sub-let Houses	16	—
* „ „ „ Canal Boats	1	—
* „ „ „ Cowsheds and Milkshops	2	—
***Notice Servers	3	—
Chief Clerk	1	—
Clerical Staff (Medical Branch)	12	—
„ „ (Sanitary Branch)	13	—
***†Disinfecting Inspectors, for removing patients and infected bedding, and disinfecting infected houses, &c.	15	—
Persons engaged as Caretaker of Mortuary, and for the cleansing of verminous children	—	2
Motor Ambulance Drivers	2	—
Men engaged stripping walls of infected houses, limewashing middensteads, rat-catching, &c.	24	—
Total No. of Staff	154	38

In every case Officers are selected for these positions whose previous training and occupation have been such as to fit them for the special duties they are called upon to discharge. Those marked * are required to hold a certificate affording evidence of adequate sanitary instruction. ||Registered midwife, a fully qualified nurse, and holds diploma of London Obstetrical Society. ²A fully qualified nurse, and has had special training in Ophthalmia Neonatorum. §Butchers by trade, specially trained and certificated; candidates are submitted to practical examination upon the lines which have been indicated in the Report of the Royal Commission upon Tuberculosis. **Three are Fishmongers by trade, and one a Fruiterer. †Hold Marine Engineers' First Class Certificates. ‡The Superintendent holds certificate of St. John Ambulance Association. ***Several hold the certificate of the Sanitary Institute, or an equivalent thereto.

The number of occasions upon which the advice and assistance of the Health Department have been sought has increased during the year. These applications fluctuate slightly year by year; in 1908 they were 8,575; in 1909, 8,779; in 1910, 9,354; in 1911, 9,688; and in 1912, 10,451. As in former years, complaint in many cases was made to the Health Department only after repeated requests addressed to the persons causing or allowing the nuisance, or to agents or owners of property, had been ignored. Generally speaking, these complaints arise in connection with jerry-built property. A great deal of the time of the Inspectors was taken up by these special examinations.

Requests to examine important public buildings and offices, as well as highly-rented dwelling-houses, are numerous, and the application of the smoke test has in many cases brought to light defects in the drainage system. Requests for the application of the smoke test are frequent, and involve considerable time in carrying out.

The District Sanitary Inspectors visit all premises where a nuisance is complained of, at the earliest possible moment, and last year 13,641 nuisances were discovered as the result of complaints, and preliminary notices were served either on the owners or the occupiers to remedy them, except where the matter was one which came within the province of another department, in which case it was referred to the other department to be dealt with.

The nuisances for which notices were served, numbering 10,811, were referred to the Prosecuting Inspectors for re-inspection, and where necessary further proceedings were taken.

In the case of ordinary nuisances, of which there were 93,611 discovered last year, preliminary notices were also served on the owner or occupier, but the nuisances in the first instance were re-inspected by the District Sanitary Inspectors. There were 64,862 re-inspections of nuisances made by the District Sanitary Inspectors, and 35,091 nuisances were found to have been abated. Statutory notices were served in respect of those nuisances found not abated, and these were again re-inspected by District Inspectors. Those found to be still not abated were referred to the Prosecuting Inspectors for further action. In addition to these numbers there were 23,617 references to other departments.

The following table shows the number of nuisances found by the District Sanitary Inspectors on routine inspection or on complaints, and the character of the proceedings taken by the Prosecuting Sanitary Inspectors to abate the nuisances, and the results:—

			<u>1911.</u>	<u>1912</u>
Number of Complaints made by Inhabitants	...	...	9,688	10,451
„ Nuisances discovered on above complaints...			12,030	13,641
„ „ „ „ house to house				
inspection	...		81,542	93,611
Total Nuisances	...		93,572	107,252
„ Notices issued	...	...
		{ Owners	35,247	53,650
		{ Occupiers	951	2,067
Total Notices	...		36,198	55,717
„ Notes to Complainants	...	...	1,589	1,455
„ Re-inspections of Nuisances	...	...	61,404	64,862
„ Nuisances abated on first re-inspection	...		37,618	35,091
„ Visits to Premises under observation	...		1,365	1,372
„ Incidental calls	...	...	27,275	26,307
„ special nuisances referred to Prosecuting				
Inspectors...	...	...	9,783	10,811
„ ordinary do. do.	...	...	23,776	29,575
Total	...	...	33,559	40,386

					<u>1911</u>	<u>1912</u>
Number of visits made by Prosecuting Inspectors, <i>re</i>						
special reports	...	...	...	...	12,399	17,736
„ visits made by Prosecuting Inspectors, <i>re</i>						
ordinary reports	...	...	...	...	39,524	38,080
	Total	...	...	...	51,923	55,816
„ re-inspections of nuisances	...	...	...	...	82,611	87,468
„ nuisances abated on re-inspection	...	...	...	...	32,735	31,306
„ notes sent to comply with notices	..	...	...	...	6,097	2,857
„ re-tests of drains after compliance with						
notices	...	...	...	...	173	188
„ Informations laid for nuisances	...	...	...	...	136	212
„ Magistrates' Orders	...	...	...	...	97	170
„ Fined	...	...	...	...	15	18
„ Acquitted or Withdrawn	...	...	...	...	24	24
Amount of Fines and Costs	...			£40 4 6 |	£58 10 6	

The nuisances dealt with comprise mainly—defective and choked drains, sink waste pipes and spouts; defective roofs; defective flagging and paving; defective water-closet basins, putty joints, walls, floors, seats and doors; defective or dirty cisterns; defective supply pipes; insufficient or no supply of water; defective chimney flues; offensive matter, animals or poultry on premises; also dirty floors, &c.

IMPROVED SANITARY ASHBINS SUBSTITUTED FOR ASHPITS.

This important work has been steadily continued, and as a result, 4,487 insanitary ashpits have been abolished and improved sanitary ashbins substituted.

					<u>1911.</u>	<u>1912.</u>
No. of defective Ashpits reported	...	...	...	...	3,647	2,360
„ Notices	...	...	...	...	3,926	4,509
„ Re-inspections relative to abolition of ashpits						
and provision of ashbins	...	...	...	...	17,602	13,535
„ Improved Sanitary Ashbins supplied	...	...	...	...	10,033	7,370
„ Ashpits abolished	...	...	...	...	5,983	4,487
„ Visits to premises	...	...	...	...	30,058	25,792

The number of improved sanitary ashbins supplied in place of old insanitary ashpits is 7,370. In addition, approximately 324 improved bins have been placed in new property, 733 ashbins have been renewed, and 279 ashbins supplied to premises where neither ashpit or ashbin accommodation existed, making a total of 8,706. 175 ashbins have also been repaired.

There are now 111,487 sanitary ashbins in use in the City; there are still approximately 16,000 ashpits in the City.

SPECIAL VISITS TO SANITARY CONVENIENCES.

					<u>1911.</u>	<u>1912.</u>
Number of visits to offices ...	...	...	...	...	22	135
„ „ public lavatories ...	...	...	...	...	6	2
„ „ women's lodging houses ...	...	...	...	...	220	229

REFERENCES FROM OTHER DEPARTMENTS.

				<u>1911.</u>	<u>1912.</u>
Received from the Education Department ...	...	...	...	25,767	24,888
„ City Engineer ...	...	...	...	8,577	9,844
„ Water Engineer ...	...	...	...	1,651	12,059
„ Lodging-house Inspectors..	...	...	...	6,361	7,101

The references from the Education Department relate to school children said to be suffering from measles, whooping cough, ringworm, skin disease, neglect, &c.

The references from the other Departments mainly comprise insanitary conditions discovered by officers belonging to those departments, but with which it is not within their province to deal. The City Engineer's Department continues to report defects in private drains brought to light during the process of systematic flushing.

REFERENCES TO OTHER DEPARTMENTS.

A considerable number of conditions ascertained by the Male Sanitary Staff which did not come within the scope of the Health Department were referred to other departments to be dealt with:—

			<u>1911.</u>	<u>1912.</u>
Referred to City Engineer	...	...	19,136	12,730
„ Building Surveyor	...	...	2,817	2,614
„ Water Engineer	...	...	7,188	8,273
„ Education Department	...	...	23,917 *	22,112 *

The references to the Water Engineer comprise mainly, defective fittings, resulting in waste of water; also cases in which the supply was insufficient, owing to various causes.

The references to the City Engineer consist principally of choked main drains and street gullies, and defective street and passage pavement; the references to the Building Surveyor concern dangerous walls, floors, roofs, &c.

References to the Education Department chiefly relate to children from infected houses who are attending school.

HOUSE TO HOUSE VISITATION.

The following table indicates the results of the systematic house-to-house visitation by the District Male Staff:—

			<u>1911.</u>	<u>1912.</u>
Number of Inspections of Street Houses	...	...	83,935	85,252
„ Street Houses found Clean	...	...	82,620	84,075
„ Apartments in Street Houses Examined.	424,159			436,299
„ Inspections of Court Houses	...	...	4,905	3,636
„ Court Houses found Clean	...	...	4,719	3,483
„ Apartments in Court Houses Examined.	14,809			11,436
Total Number of Houses Examined	...	...	88,840	88,888

The gradual diminution in the number of Courts enables a more frequent inspection to be made.

* For number of references by Female Inspectors see page 127.

<u>DIRTY HOUSES.</u>						<u>1911.</u>	<u>1912.</u>
Number of Dirty Street Houses Inspected	...	...	...	...	...	1,315	1,177
„ „ Court „ „	...	...	...	...	...	186	153
„ „ Cellars Inspected	...	...	...	...	...	217	137
„ Notices to Owners to Cleanse Dirty Houses	...	...	...	...	...	1,627	1,293
„ Notices to Occupiers to Cleanse Dirty Houses	...	...	...	...	...	69	70
„ Notices to Owners to Whitewash Exteriors of Court Houses	...	...	...	...	...	914	603
„ Informations	...	...	...	...	...	4	5
„ Fined	...	...	...	...	...	1	2
„ Acquitted or Withdrawn	...	...	...	...	...	3	3
Amount of Fines and Costs						£1 13 6	£1 4 6

All the above houses were subsequently cleansed.

INFECTED HOUSES.

The following table shows the number of houses visited where notifiable infectious diseases had occurred, also the number of visits to these houses, and to houses where cases of non-notifiable infectious diseases had been reported to the department by the Education Department.

	<u>1911.</u>	<u>1912.</u>
Number of Infected Street Houses (notified cases)	11,383	11,024
„ „ Court „ („ „)	370	296
„ „ Cellars („ „)	32	26
„ visits to infected Houses and Cellars (notified cases)	11,194	11,889
„ „ „ „ „ (school cases)	11,851	13,638
„ Smallpox, Typhus, &c., enquiries	16,289	2,830
„ Phthisis revisits	6,118	7,747
„ Cholera, Yellow Fever and Plague enquiries	171	1,044
„ Vaccination enquiries	487	—

EXAMINATION OF CELLARS AND CELLAR DWELLINGS.

			<u>1911.</u>	<u>1912.</u>
Number of Inspections of Street Cellars	...	...	15,967	16,311
„ Street Cellars found disused	...	...	303	570
„ „ „ used for Lumber, &c.	...	...	10,036	9,855
„ „ „ used as Kitchens	...	...	4,163	4,449
„ „ „ found illegally occupied	...	...	72	67
„ „ „ „ legally „	...	...	1,393	1,370
„ Notices issued to Owners	...	...	118	108
„ „ „ Occupiers	...	...	67	63
„ Inspections of Court Cellars	...	...	1,194	1,038
„ Court Cellars found disused	...	...	18	86
„ „ „ used for Lumber, &c.	...	...	675	796
„ „ „ used as kitchens	...	...	500	156
„ „ „ illegally occupied	...	...	1	—

The number of cellars filled in by the Health Committee, free of charge to the owners, during the year was 30, and the total filled in during the last ten years was 286.

The total number of cellars let as separate dwellings at present upon the Register is approximately 1,614, in which about 5,112 people are at present housed.

STATEMENT SHOWING THE NUMBER OF CELLAR
DWELLINGS, AND POPULATION, FROM
THE YEAR 1898 TO 1912.

Year	No. of Cellar Dwellings.	Population.
1898.....	3,288	12,000
1899.....	3,288	11,000
1900.....	3,209	10,500
1901.....	3,201	9,400
1902.....	3,178	9,300
1903.....	3,123	9,200
1904.....	3,058	9,160
1905.....	2,558	7,860
1906.....	2,016	6,337
1907.....	1,955	6,154
1908.....	1,793	5,379
1909.....	1,776	5,328
1910.....	1,764	5,292
1911.....	1,685	5,055
1912.....	1,614	5,112

Cellars occupied as separate dwellings must comply with certain requirements under the Liverpool Improvement Act of 1871, and the Public Health Act of 1875. The requirements of the Act specially relating to Liverpool have been summarised in the report for 1904.

Under the powers of the Liverpool Corporation Act of 1908, the occupation of cellars as separate dwellings, the floors of which are more than two feet below the ground, must cease after December 31st, 1912.

COURT AND ALLEY EXAMINATIONS.

		<u>1911.</u>	<u>1912.</u>
Number of Inspections of Courts and Alleys...	...	30,850	28,618
„ „ Closets	... ..	60,078	55,722
„ Closets found Dirty, but cleansed by			
Officer's Instructions	... ..	29,004	25,640

Special and systematic visits to courts and alleys are made with the object of ensuring the cleanliness of the domestic offices and the surface of the courts. The aim is to keep the courts and alleys uniformly clean throughout the week, and with this view the district inspectors are instructed that every tenant in each court is in turn to be held responsible for the cleanliness of the water-closets for a period of one week; the inspector records in his visiting book whose turn it is, and duly informs that tenant. Failing compliance with his requirements, an information is laid under a bye-law, made under the Liverpool Sanitary Act, 1846.

Under the Public Health Acts Amendment Act, 1890, somewhat similar proceedings may be taken, and during the year leaflets containing the provisions of Sec. 21 of this Act were distributed. The leaflet referred to is as follows:—

CITY OF LIVERPOOL.

NOTICE.

SANITARY CONVENIENCES USED IN COMMON.

The attention of occupiers of houses is directed to the following provision of Section 21 of the Public Health Acts Amendment Act, 1890.

(1) If any person injures or improperly fouls any such sanitary convenience, or anything used in connection therewith, he shall for every such offence be liable to a penalty not exceeding TEN SHILLINGS.

(2) If any sanitary convenience or the approaches thereto, or the walls, floors, seats or fittings thereof is or are in the opinion of the Urban Authority, or of the Inspector of Nuisances, or Medical Officer of Health of such authority, in such a state or condition as to be a nuisance or annoyance to any inhabitant of the district for want of the proper cleansing thereof, such of the persons having the use thereof, in common as aforesaid as may be in default, or in the absence of proof satisfactory to the court as to which of the persons having the use thereof in common is in default, each of those persons shall be liable to a penalty not exceeding TEN SHILLINGS, and to a daily penalty not exceeding FIVE SHILLINGS.

It is the intention of the Corporation to rigidly enforce these provisions.

The courts and alleys continue to decrease in number, owing to the demolition of low-class property for the extension of business premises, or to the removal of insanitary property by the Housing Committee.

STATEMENT SHOWING THE NUMBER OF COURTS AND
ALLEYS SCHEDULED FOR INSPECTION
FROM THE YEAR 1898 TO 1912

Year 1890.....	2,165	Courts	and	Alleys.
1895.....	1,660	,,	,,	,,
1898.....	1,466	,,	,,	,,
1899.....	1,432	,,	,,	,,
1900.....	1,195	,,	,,	,,
1901.....	1,159	,,	,,	,,
1902.....	1,074	,,	,,	,,
1903.....	1,042	,,	,,	,,
1904.....	976	,,	,,	,,
1905.....	927	,,	,,	,,
1906.....	857	,,	,,	,,
1907.....	825	,,	,,	,,
1908.....	782	,,	,,	,,
1909.....	698	,,	,,	,,
1910.....	604	,,	,,	,,
1911.....	566	,,	,,	,,
1912.....	499	,,	,,	,,

This shows a diminution in twenty-two years of 1,666 courts and alleys, of which 326 were demolished during the last five years.

In the months of July, August and September many of the water-closets were more frequently visited, and throughout the year all courts and alleys having covered entrances were specially washed and hosed down by the scavengers. Under the Liverpool Sanitary Act the exteriors of all courts and alleys require to be limewashed as often as may be necessary. The number of courts requiring limewashing in 1912 was 450, representing approximately 2,801 houses.

The Building Surveyor has kindly supplied the following table:—

NUMBER OF HOUSES ERECTED AND TAKEN DOWN DURING THE YEAR ENDING
DECEMBER, 1912.

DISTRICTS.							Number erected.	Number taken down
Scotland	...	...	...	...	...	...	—	63
Exchange	...	...	...	...	...	...	—	100
Abercromby	...	...	...	..	...	...	5	117
Everton...	...	...	...	...	...	...	1	95
Kirkdale	...	...	...	...	...	...	—	1
West Derby (West)	...	...	...	...	...	...	—	13
Toxteth...	...	...	...	...	...	...	—	88
Walton ..	...	...	..	...	...	...	322	2
West Derby (East)	...	...	...	...	...	...	244	3
Wavertree	...	...	...	...	...	...	252	—
Toxteth (East)...	...	...	...	...	...	...	1	—
Garston...	...	...	...	...	...	...	53	—
Fazakerley	...	...	...	...	...	...	—	—
Totals							878	482

The City Engineer has kindly supplied the following:—

Number of cellars filled in and bricked up during 1912	...	...	...	30
“ “ “ “ the last 10 years	...	...	...	286

SEWER VENTILATION TO END OF 1912.

Number of 9-inch by 6-inch, 9-inch, 6-inch, 6-inch by 4-inch, 4-inch by 4-inch, 4-inch, and 3-inch Iron Pipe Ventilating Shafts	...	...	1,901
Number of Street Ventilating Manhole Covers and Gratings	...	...	6,541

COMMON LODGING-HOUSES.

At the end of the year 1911 there were on the register a total (including emigration houses) of 330 lodging-houses, and at the end of 1912 the total number was 321, which furnished accommodation for 11,285 lodgers besides 714 members of the keepers' families.

During the year 45 houses were given up and removed from the register, and 36 new houses added, leaving the number on the register 321.

In some of the better-class houses for men, separate cubicles are provided for each lodger, the price paid for them varying from 6d. to 1s. 6d. per night. These cubicles are much more appreciated than the ordinary accommodation provided.

The number of what are known as "model" lodging-houses, for men only, upon the register is 140; and these are registered to accommodate 5,970 lodgers, as well as 240 members of the keepers' families.

The term "model" appears now to be used as a trade designation to indicate premises used for the accommodation of one sex only.

There are also 23 registered "model" lodging-houses for the accommodation of women only. These have rooms for 714 lodgers, in addition to 35 members of the keepers' families.

Common Lodging-Houses for Women have been fully dealt with in the report for 1909.

The visits to lodging-houses are both by day and by night. The night visits are almost restricted to the lower districts and commoner class

of house. The lodging and emigration houses of the better class, especially those provided only with single beds for each person, and with no more beds than are equivalent to the number of lodgers allowed, are only occasionally visited at night, unless special circumstances necessitate a closer supervision.

Section 77, Public Health Act, 1875, enacts:—

A person shall not keep a “ Common Lodging House,” or receive a lodger therein, unless the house is registered in accordance with the provisions of this Act.

Section 78, Public Health Act, 1875, enacts:—

A house shall not be registered as a common lodging-house until it has been inspected and approved for the purpose by some officer of the local authority; and the local authority may refuse to register as the keeper of a common lodging-house a person who does not produce to the local authority a certificate of character, in such form as the local authority may direct, signed by three inhabitant householders of the parish respectively rated to the relief of the poor of the parish within which the lodging-house is situate for property of the yearly rateable value of six pounds or upwards.

Section 86, Public Health Act, 1875, enacts:—

Any keeper of a common lodging-house who

(i) Receives any lodger in such house without the same being registered under this Act; shall be liable to a penalty not exceeding five pounds, and in the case of a continuing offence, to a further penalty not exceeding forty shillings for every day during which the offence continues.

During the year four informations under this section were laid, and convictions followed.

The number of day visits paid during the year was 14,402, and the night visits 1,096. During the preceding year the day visits were 16,968, and the night visits 1,318.

During the year 17 informations were laid against keepers of common lodging-houses for the following offences:—

	<u>1910.</u>		<u>1911.</u>		<u>1912.</u>
Not sweeping floors	3	...	10	...	4
Not washing floors	0	...	3	...	4
Overcrowding	1	...	16	...	4
Receiving lodgers in unregistered					
houses or rooms	1	...	2	...	4
Mixing sexes	0	...	6	...	0
Not limewashing	0	...	1	...	1
				—	
				17	
				—	

Convictions followed in all the cases, the total amount of fines amounting to £16 3s. 0d., and ranging from 1s. and 1s. costs to 60s. and 4s. 6d. costs. During the preceding year there were thirty-six convictions, and the fines amounting to £21 7s. 0d.

The number of lodging-houses found dirty was 33, in each case notices were served to limewash and cleanse the premises. In each instance these notices were complied with, and in one case standing over from 1911, an information was laid against the keeper who was fined 10s. and 4s. 6d. costs. Subsequently the keeper left the house and the premises are now unoccupied.

The following is a list of "Common Lodging-houses" for women now on the register:—

No.	Street.	Keeper.	Registered Deputy Keeper.
	Netherfield Road South, Ann Fowler Memorial Home.	Florence Booth	Harriett Simmons
163	Islington	Marie Firth	Annie Cartwright
46a	Everton Brow	Rev. Herbert Wood	Miss K. Douglas
44a	„	„	„
45	„	Edward Boreland ...	Mrs. Hannah Brown
79	Kempston Street	Margaret Ryan	Bridget Ryan
89	„	Richard Baines	Mrs. Elizabeth Wright
94	„	John Kelly	Mrs. Kelly
28	Wilton Street	Margaret Ryan	Ellen Kelly
87	Soho Street	Rose Dacy	Mrs. Mary E. Smith
89	„	„	„ „
114	„	Richard Baines	Mrs. Edith Watson
16	Queen Anne Street	Sarah Edwards	Mrs. Mary Bethell
8	Prince Edwin Street	Ernest Wight	Mrs. Wight
10	„ „	„	„ „
121	Richmond Row	Thomas Lancaster ...	Mrs. Lancaster
123	„ „	„	Jane Cooper
165	„ „	Maria Baines	Mary Noon
36	Circus Street	Martin Carroll	Mrs. Florence Smith
31	Baptist Street	„	„ „
22	Springfield	Catherine Todd	Mrs. Elizabeth Deakin
3	Trinity Place	„ „	„ „
13	Devon Street	Elizabeth Buckley ...	Annie Howley

IMPROVEMENTS IN SANITARY ACCOMMODATION.

The following is a list of "Common Lodging-Houses" where structural alterations have been carried out during 1912 with the view of improving the kitchen and washing accommodation as well as the sanitary arrangements:—

45, Bankhall Street.—Five trough water-closets abolished, eight modern water-closets erected, eight wash-basins with hot and cold water service installed.

13, St. Paul's Square.—One additional water-closet erected.

68, Oxford Street.—Three additional water-closets erected, five additional wash-basins fixed.

135, Crown Street.—Two wash-basins fixed.

37, Rose Place.—Two additional water-closets erected, five wash-basins with hot and cold water service installed.

39, St. Anne Street.—Three trough water-closets abolished, three modern water-closets erected, four wash-basins fixed.

9, Rose Hill.—Two additional water-closets erected, two additional wash-basins fixed.

41, St. Anne Street.—Two trough water-closets abolished, two modern water-closets erected, four wash-basins fixed.

59 and 61, St. Anne Street.—Four trough water-closets abolished, six modern water-closets erected, eight wash-basins and one bath with hot and cold water service installed, cellar kitchen re-flagged.

107, St. Anne Street.—Drains re-constructed and intercepted, nine trough water-closets abolished, eighteen modern water-closets erected.

54 to 58, Richmond Row.—Two additional water-closets erected.

131, Richmond Row.—Eight trough water-closets abolished, eleven modern water-closets erected, three additional wash-basins fixed.

43, St. Anne Street.—Four trough water-closets abolished, one pan water-closet abolished, seven modern water-closets erected, seven wash-basins fixed.

49, St. Anne Street.—Three trough water-closets abolished, three modern water-closets erected, four wash-basins fixed.

24 to 26, Circus Street.—One additional water-closet erected, three wash-basins fixed.

140, Stanley Road.—Four wash-basins fixed.

144, Stanley Road.—Three wash-basins fixed.

146, Stanley Road.—Three wash-basins fixed.

148, Stanley Road.—Three wash-basins fixed.

45, Everton Brow.—One trough water-closet abolished, two modern water-closets erected.

127 and 129, Islington.—Improved light and ventilation provided to kitchens.

66, Roscommon Street.—One additional wash-basin fixed.

3, Trinity Place.—One additional water-closet erected.

29, Everton Brow.—Four additional water-closets erected, two additional wash-basins fixed.

132, Richmond Row.—One bath and seven wash-basins with hot and cold water service installed.

13, Salisbury Street.—Two additional water-closets erected, one additional wash-basin fixed.

28, Wilton Street.—Two wash-basins with hot and cold water service installed.

7, Springfield.—Six wash-basins fixed.

125, Islington.—Five wash-basins with hot and cold water service installed.

1, Everton Brow.—One additional water-closet erected.

7 to 11, Everton Brow.—Six additional wash-basins fixed (total 13).

14, Wilton Street.—One additional water-closet erected.

13, Devon Street.—One additional water-closet erected.

34, Stafford Street.—One additional water-closet erected, two additional wash-basins fixed.

79, Kempston Street.—One additional water-closet erected.

7 to 9, Falkland Street.—Two additional water-closets erected, two additional wash-basins fixed.

4, Park Lane.—Six wash-basins fixed.

6, Liver Street.—One additional water-closet erected.

34, St. James Street.—Two additional water-closets erected, four additional wash-basins fixed.

6, Prescott Street.—One additional water-closet erected, two wash-basins fixed.

2, Childwall Street.—One additional water-closet erected, three wash-basins fixed.

21, West Derby Street.—Two wash-basins fixed.

69, Beaufort Street.—One additional water-closet erected, two wash-basins fixed.

42, St. James Place.—One additional water-closet erected, two wash-basins fixed.

79, Mill Street.—One additional water-closet erected.

75 and 77, Roscommon Street.—Seven trough water-closets abolished, twelve modern water-closets erected, two baths and thirteen wash-basins with hot and cold water service installed.

202, Great Homer Street.—One additional water-closet erected, four wash-basins fixed.

3 and 5, Upper Parliament Street.—Three additional water-closets erected.

13, Upper Parliament Street.—Four trough water-closets abolished, five modern water-closets erected, five wash-basins fixed.

SEAMEN'S LICENSED LODGING-HOUSES.

The Corporation have made Bye-laws, with the sanction of the President of the Board of Trade, for the licensing of Seamen's Lodging-Houses, under the Merchant Shipping (Fishing Boats) Act, 1883, section 48.

Applications from the keepers of Registered Common Lodging-Houses for licenses authorising the designation of such Registered Common Lodging-Houses as Seamen's Licensed Lodging-Houses, are infrequent, only five such licensed houses now being on the register, these provide accommodation for 94 seamen.

The number of licenses granted since the adoption of the Seamen's Lodging-House Bye-laws is 33.

It has not been found necessary to institute proceedings under the bye-laws in question.

Some years ago the holders of licenses to keep Seamen's Lodging-Houses were authorised by the Board of Trade to board vessels and seek for lodgers, and while this privilege was granted there was an advantage in holding such a license, but that privilege being now withdrawn, it does not appear that there is any advantage to the keeper of a common lodging-house to have his premises registered as a Seamen's Lodging-house, and, hence, probably, the small number upon the register.

HOUSES LET IN LODGINGS.

The supervision of these houses and the prevention of overcrowding and other breaches of the bye-laws constitute an important branch of sanitary administration.

There is a decrease in the number of these houses now on the register, the number at the end of the year, 16,475, contrasting with 18,873 at the end of 1911, a decrease of 2,398. The decrease in the number of houses is largely owing to a large number of sub-let houses being included in three areas comprised within the operations of the Housing Committee, the areas in question being Beau Street, Holly Street and Birkett Street.

The number added to the register during 1912 was 531; the number cancelled, owing to their being no longer sub-let, was 2,430. The number returned as demolished was 499, making a total on the register, December 31st, 1912, of 16,475, as against 18,873 at the close of the preceding year.

DAY VISITS AND GENERAL CLEANLINESS.

The systematic visitation by day has been fully maintained, the number of day visits being 93,253, and the result has been a general improvement in the cleanliness of the rooms, stairs and passages of these houses.

The number of offences arising from neglect to cleanse floors, stairs, &c., was 432, as against 481 during the previous year, a decrease of 49 cases.

Under the Bye-laws sanctioned by the Local Government Board on the 7th day of February, 1911, provision is made to serve notice on the Owners of Houses let in Lodgings to thoroughly cleanse from time to time every room, staircase and passage in such houses. The Bye-law is as follows:—

Subject to the provisions of these Bye-laws, the landlord of a lodging-house shall in the months of April and October in every year, and at such other times as may be necessary, cause every part of the premises to be thoroughly cleansed. He shall at the same time, and at such other times as may be necessary, except in such cases as are hereinafter specified, cause every area, the interior surface of every ceiling and wall of every water-closet belonging to the premises, and the interior surface of every ceiling and wall of every room, staircase and passage in the house to be thoroughly washed with hot lime-wash.

Provided that the foregoing requirement with respect to the lime-washing of the internal surface of the walls of rooms, stair-cases, and passages shall not apply in any case where the internal surface of any such wall is painted, or where the material of or with which such surface is constructed or covered is such as to render the lime-washing thereof unsuitable or inexpedient, and where such surface is thoroughly cleansed and the paint or other covering is renewed, if the renewal thereof be necessary for the purpose of keeping the premises in a cleanly and wholesome condition.

Under this Bye-law the following notices were served:—

Preliminary Notices	...	...	...	...	267
Statutory Notices	...	...	...	...	36
Comply Notes	...	...	...	...	4
Number of rooms cleansed	...	...	...	...	997
Number of yards and water-closets cleansed	...	...	...	...	113
Number of Notices not complied with at the end of December, 1912	...	...	...	...	4

The Bye-laws approved by the Local Government Board on the 7th of February, 1911, require that sufficient closet accommodation shall be provided in connection with sub-let houses, in the proportion of not less than one water-closet to every 12 persons.

Notices have been issued in 196 instances directing the attention of owners to the insufficient water-closet accommodation, with the result that in 26 instances increased water-closet accommodation has been provided, and in the remaining cases arrangements were made to reduce the number of lodgers to 12.

NIGHT VISITS AND OVER-CROWDING.

Cases of overcrowding were more numerous than in the previous year, the number of convictions being 612, as against 526 in 1911. There has been a steady decline in the offence of overcrowding during the last six years. The percentage of convictions to the number of visits was 4·88 in the year 1906; during the year under review it was only 2·76. (See table, page 267.)

The number of visits paid to houses let in lodgings during the day was 93,253, and during the night 22,173, with the result of finding 775 rooms overcrowded. In addition to overcrowding, 325 cases of indecent occupation came under the notice of the inspectors, as against 173 last year. These cases appear to be the outcome of ignorance and indifference, and not of immoral intent. Additional powers have been given to deal with the offence of non-separation of sexes, with the result that during the year 208 informations were laid. In the remaining cases the offenders were cautioned by the Inspectors.

The Bye-laws dealing with this offence are Nos. 18 and 19, and read as follows:—

18.—The tenant of a lodging-house shall not knowingly suffer any person above the age of twelve years to occupy as a sleeping apartment any room in such lodging-house if the room is occupied by more than one person above that age, and of the opposite sex.

19.—A lodger in a lodging-house shall not suffer any person above the age of twelve years to occupy as a sleeping apartment any room let to such lodger in such lodging-house if the room is occupied by more than one person above that age and of the opposite sex.

Informations were laid against 1,283 tenants and lodgers (room-keepers) for breaches of the bye-laws, viz. :—

Overcrowding	641
Floors not washed	307
Floors not swept	35
Not cleansing stairs, &c.	90
Non-separation of sexes	208
Refusing admission to Inspector ..	1
Obstructing Inspector	1
	—
Total.....	1,283
	—

Four cases were withdrawn, seventy-four cases were discharged with a caution, and in seven cases the defendants had left the premises before the summonses could be served.

As the result of proceedings before the Stipendiary and other Magistrates, fines were inflicted amounting during the year to £183 8s. 6d.

Offences against the bye-laws have been more than in the preceding year.

The total number of offences against the bye-laws this year was 1,283, being 167 more than the number last year, which was 1,116.

The increase in the number of offences is principally due to the introduction of the new Bye-laws, which gives additional powers for dealing with the offences created by not cleansing room floors, stairs and passages, and the non-separation of sexes. The tenant is now amenable, in addition to the lodger.

The gradual diminution in overcrowding led the Health Committee, in 1901, to amend the bye-laws relating to houses let in lodgings, and the City Council, with the sanction of the Local Government Board, adopted amended bye-laws, which amongst other important provisions contained clauses providing that every lodger above 10 years of age shall have not less than 400 cubic feet of free air space, and every person below 10 years of age shall have not less than 200 cubic feet, but if the room is used as a day room as well as a bedroom, then every inmate must have at least 400 cubic feet. Under the previous bye-law a space of 350 feet only was required, and two persons under twelve were regarded as one adult.

The bye-laws came into operation on the 30th January, 1901. One result of these bye-laws—which required so relatively large an addition to the cubic space allowed for each lodger—was to put an entirely new definition upon the offence of overcrowding, and although the great majority of people quickly appreciated the effect of the new bye-laws, yet there was necessarily a considerable increase in the number of persons proceeded against for overcrowding amongst those who neglected to comply with the altered provisions.

The table showing the number of sub-let houses on the register, together with the number of visits for the detection of overcrowding, for the past 12 years will be found on page 267, in the insanitary property section of the Report.

CANAL BOATS.

The number of inspections of canal boats during the year was 5,048, and the condition of the boats and their occupants, as regards matters dealt with in the Acts and Regulations, is indicated by the following information—

Twelve boats, not registered by their present owners, were found to be used as dwellings. Written notices were sent to the owners in 4 cases, and 8 verbal notices were given. In 2 cases informations were laid against the owners and fines inflicted. The other notices were complied with.

Fourteen boats were found without certificates on board. Notices were sent to the owners in 13 cases, and 1 verbal notice was given. The notices were complied with in each case.

Fourteen boats were found without the registered number painted on both sides of the boat, and 13 written and 1 verbal notice were given to the owners. The omission has been rectified in 13 instances; in the other instance an information was laid against the owner and a fine was inflicted.

On four boats defective second bulkheads were reported. Notices were sent to the owners in 3 cases, and 1 verbal notice was given. The defects were remedied in each case.

In fourteen boats the cabins required re-painting. Notices were sent to the owners in each case, and all were complied with.

Dirty cabins were reported in 20 cases. In 14 cases verbal notices were given to the masters, and in others written notices were sent to the owners. In 18 cases the notices were complied with, and 2 not being complied with informations were laid against the masters, and fines inflicted. The cabins were subsequently cleansed.

Besides the foregoing there were 66 instances of infringements of the Acts and Regulations caused by:—

Leaky decks	...	...	...	...	30
Leaky condition of Boats...	...	...	...	...	9
Defective lockers	...	...	...	...	2
Defective scuttle covers	...	...	...	...	1
Defective ventilation	...	...	...	...	2
Defective floors	...	...	...	...	5
No water casks on board	...	...	...	...	11
Defective stoves	...	...	...	...	5
Non-removal of bilge water	...	...	...	...	1
Total					66

Sixty-four notices were sent to the owners, and two verbal notices were given in respect of the above infringements. All the notices were complied with.

Five boats were found with the cabins overcrowded, and one indecently occupied, and the Masters were cautioned. In five instances the caution was sufficient, but in the other instance an information was laid against the Master for indecent occupation of cabin, and a fine inflicted.

The total number of infringements of the Acts and Regulations referred to in the Report was 146, which occurred on 114 boats.

Informations were laid against five Masters and one Owner of boats as follows:—

Nature of Contravention.		Penalty.
Dirty Cabin	(Master)	1/- and 1/- costs.
Do.	do.	5/- and 4/6 costs.
Unregistered boat	do.	5/- and 4/6 costs.
Do.	do.	5/- and 4/6 costs.
Registered numbers not painted on boat	(Owner)	20/- and 4/6 costs.
Indecent Occupation	(Master)	2/6 and 2/6 costs.

The total fines amounted to £3 0s. 0d.

No case of infectious sickness occurred on the canal boats during the year.

Seven notices were sent to the Education Committee relating to 7 children living on canal boats and not attending any school.

The number of boats on the register is 587. Seventeen boats have been removed from the register, as it was ascertained that eight had been broken up, three had left the district, and six were no longer used as dwellings. It is probable that other boats have been broken up or have left the district, but in the absence of definite evidence of this, the boats remain on the register. During the year 15 new boats were registered, 4 re-registered on account of change of owners, 5 re-registered on account of change of owners and name of boat, and 1 re-registered on account of structural alterations. All boats re-registered on account of change of owners, or the name of the boat being changed, or on account of structural alterations, retain their original numbers. Copies of the registration certificates were issued to the owners of seven boats, owing to the original ones being worn out.

In 1898, the Canal Boat Inspectors were appointed as Port Sanitary Inspectors—an appointment which authorised them to inspect all classes of boats, as a difficulty arose in regard to certain boats plying upon the canal which were not registered under the Canal Boat Acts, but which had been registered by the Board of Trade under the Merchant Shipping Act. Thirty-six visits were made to boats of this class, and all were found correct.

In 1903, the Port Sanitary Inspectors were appointed as Canal Boat Inspectors. This appointment authorised them to inspect canal boats which ply to and from the docks, and on the river. During last year these Inspectors made 788 visits, which are included in the foregoing report. The number of contraventions for which notices were served on the owners was 49 on 39 boats.

SMOKE NUISANCES.

Proceedings for the abatement of Nuisances caused by the emission of excessive smoke from factory chimneys or from steamers were taken under the Liverpool Sanitary Amendment Act, 1854, sections 24 and 25, the Liverpool Improvement Act, 1882, section 77, the Liverpool Corporation Act, 1902, section 57, and the Liverpool Corporation (General Powers) Act, 1905, section 7, with the following results:—

							<u>1911.</u>	<u>1912</u>
Number of reports of excessive smoke from	Manufactories	...					128	111
„	„	„	Steamers in river				201	174
„	„	„	„	dock			27	19
							<u>356</u>	<u>304</u>
	Total	...	...	...	...

Admonished by the Health Committee or written to in respect to nuisances caused by the emission of excessive smoke :---

						1911.	1912.
Manufacturers ...	...	...	...	...	...	10	24
Steamship Owners	...	...	...	...	...	45	52
						<hr/>	<hr/>
Total	...	...	...	...	...	55	76
						<hr/>	<hr/>

	<u>1911.</u>	<u>1912.</u>
Chief Inspector and Assistants gave M'facturers	385 Cautions	463 Cautions
„ „ „ Steamship Owners }	87	114
Total... ..	<u>472</u>	<u>577</u>
Number of enquiries respecting Owners	<u>397</u>	<u>383</u>

					1911.	1912.
Informations against Manufactories	..	...	...	...	118	87
„ „ Steamers in river...		...	...	...	173	139
„ „ „ dock...		...	...	...	10	2
					<hr/>	<hr/>
Total	...	...	...	...	301	228
					<hr/>	<hr/>
Acquitted or withdrawn, Manufactories		...	...	...	4	5
„ „ Steamer cases		...	...	...	4	1
					<hr/>	<hr/>
Total ..		...	...	...	8	6
					<hr/>	<hr/>

							<u>1911.</u>	<u>1912</u>
Fined, Manufactories	...	...	...	...	...	...	114	82
,, Steamers	...	...	...	...	...	...	177	140
Total	...	...	...	...	...	...	<u>291</u>	<u>222</u>

							<u>1911.</u>	<u>1912</u>
Amount of Fines, Manufactories	...	£244	13	6	£200	15	0	
,, ,, Steamers	...	318	11	6	276	1	0	
Total	...	<u>£563</u>	<u>5</u>	<u>0</u>	<u>£476</u>	<u>16</u>	<u>0</u>	

It is the duty of the Police to deal with nuisances arising from the firing of domestic chimneys.

SMOKE INSPECTION.

The falling off previously noted in the number of reports relating to excessive smoke still continues, and is an indication of the additional care exercised by manufacturers and steamship owners.

During the coal strike last year, from 19th February to 13th April there was a large increase in the number of firms cautioned, but under the special circumstances no proceedings were taken.

Out of 174 cases of excessive smoke from steamers in the river which were observed, 30 vessels were bound for foreign ports, one was towing another vessel in emergency, and consequently no proceedings were taken, and the owners of four were not traced.

In 17 cases of excessive smoke from foreign trading steamers in dock no proceedings were taken, but the owners were written to.

							<u>1911.</u>	<u>1912.</u>
Complaints received of smoke from defective house flues, and from low chimneys	...	...	...	...	...	...	177	133
Visits relating thereto	...	...	...	...	...	...	<u>983</u>	<u>846</u>
Chimneys raised in consequence of complaints	...	...	...	...	...	...	43	28
Flues altered and repaired	...	...	...	...	...	...	30	30
Attention promised	...	...	...	...	...	...	98	68
Referred to other departments	...	...	...	...	...	...	3	6
Frivolous complaints	...	...	...	...	...	...	3	1
Total complaints dealt with...	...	...	...	...	...	...	<u>177</u>	<u>133</u>

The smoke in our atmosphere is very largely contributed to by the combustion of coal in domestic firegrates, steam boiler furnaces, and other furnaces used for manufacturing processes.

It is a common error to lay the blame of the pollution of the atmosphere by smoke entirely upon the factory chimney, and this is no doubt due to the fact that it is more easily noticeable than the individually small quantities of smoke which are emitted from the chimneys of dwelling-houses, and which reach a very large amount in the aggregate.

OFFENSIVE TRADES.

Applications for permission to carry on the following offensive trades were made during the year, and a report by the Medical Officer of Health on each application was submitted to the Health Committee:—

Premises.	Business.	Granted.	Refused.	Date, 1912.
13, St. Andrew Street..	Gut Scraping	1	—	11th Jan.
Borax St., Old Swan ...	Tripe Boiling	1	—	29th Feb.
44, Oriel Street	Bone Boiling and Sweet Fat Melting	1	—	21st Mar.
15, Wolstenholme Squ	Soft Soap Manufacture	1	—	23rd May.
22/4, Maguire Street ...	Storage and Grading of sea- borne wet salted and dried Hides and Skins	1	—	11th July.
2/10, Marquis Street ...	Sorting and Selecting Sheep casings	1	—	25th July.
44, Oriel Street	Fat Melting	1	—	29th Aug.
Grist Street	Bacon and Meat Preserving	1	—	29th Aug.
Warehouse R456 Dutton Street	Storage of Salted Hides Valonia and Myrabolams	1	—	21st Nov.
22, Lace Street	Manufacture of Soft Soap, and Lubricants	1	—	19th Dec.
	Total.....	10	—	

In cases in which permission is granted, conditions are imposed requiring that the premises be put in proper order to the satisfaction of the City Engineer, Building Surveyor and Medical Officer of Health, that no public or private nuisance be caused, and that the business be discontinued whenever the Council shall so require.

The number of inspections of premises where offensive trades are carried on was 1,873, as against 1,654 in 1911.

				<u>1911.</u>	<u>1912.</u>
Total No. of Visits to Bone Boilers ...	...	...	...	176	177
„ Fell Mongers ...	...	...	...	48	50
„ Soap Boilers ...	...	...	...	229	331
„ Fat and Tallow Melters ...	...	...	...	298	309
„ Tripe Boilers .	...	...	...	205	211
„ Gut Scrapers ...	...	...	...	191	236
„ Ham Cooking and Potted Meat Works ...	...	...	...	96	96
„ Patent Manure Manufacturers ...	...	...	...	28	24
„ Tanneries ...	...	...	...	107	110
„ Knackers' Yards ...	...	...	...	151	169
„ Paint and Resin Works ...	...	...	...	31	41
„ Tar and Naphtha Works ...	...	...	...	—	12
„ Palm Oil Works ...	...	...	...	15	14
„ Cotton Seed Oil Works ...	...	...	...	35	33
„ Fish Oil Works ...	...	...	...	—	1
„ Sulphuric Acid Works ...	...	...	...	2	—
„ Lard Refiners ...	...	...	...	35	31
„ Dripping Factories ...	...	...	...	—	27
„ Rubber Works ...	...	...	...	7	1
				<u>1,654</u>	<u>1,873</u>
Total...	...	...	...	<u>1,654</u>	<u>1,873</u>

KNACKERS' YARD, CARRUTHERS STREET.THE ANIMAL SLAUGHTERING CO.

The Health Committee, in accordance with the Orders of the Board of Agriculture and Fisheries, have licensed the above Company and premises for the purpose of destroying carcasses of animals affected with contagious disease.

Carcasses of diseased horses and cattle, are destroyed under the supervision of an Inspector of the Public Health Department, at the Knackers' Yard, where specially tested iron pans with covered lids have been erected for the purpose. The carcasses are placed in the tanks intact, sulphuric acid added, and steam applied until a temperature of 250° to 260° Fahr. is reached. An exhaust pipe conveys steam and all offensive odours to the furnace, thus preventing any nuisance arising.

Unsound meat is destroyed on these premises in a similar manner.

The carcasses of horses which are destroyed on account of old age or minor complaints are also dealt with on these premises.

The following are the Returns for 1912:—

Horses Destroyed.	Horses taken in Dead.	Asses Destroyed.	Cows Destroyed.	Other Beasts.	TOTAL.
103	1,878	32	172	—	2,185

MARINE STORES.

	<u>1911.</u>	<u>1912.</u>
Number of Visits by District Sanitary Inspectors ...	1,718	1,592

(For visits by Workshop Inspectors, see page 135)

COMMON HOUSE FLY.

During the year the previous observations on the prevalence of the House Fly in certain districts were continued.

Before commencing the work, Professor Newstead kindly arranged that the Officer should be fully informed as to the methods previously adopted. He was also instructed how to distinguish the several species.

Charts have been prepared and registers compiled in accordance with these instructions.

Observations were made at 22 centres, the majority of the houses being in those areas in which Epidemic Diarrhœa is known to prevail. The investigation commenced on June 26th, and was continued until September 12th, the total number of flies caught being 137,397. Ordinary sticky fly papers, sticky reels, and balloon traps were used, and collected every 48 hours, the best results being obtained from the sticky reels. The flies were most prevalent in Rachel Street, Dryden Street, Leyden Street, and Charters Street centres, and it was found in these centres, apart from external conditions, that where food was left exposed and the habits of the people were dirty, the largest number of flies were found. In other centres, where cleanliness prevailed and care exercised in the removal of particles of food, the flies were not so numerous. In two instances in which the houses were fly infested, the number of flies immediately decreased with the cleansing of the rooms.

In view of the obvious mischief occasioned by the Common House Fly, several thousand cards containing the following information have been circulated throughout the city:—

PUBLIC HEALTH DEPARTMENT.

FLIES.

Common house flies are well known to be carriers of disease germs. The presence of large numbers of flies clearly indicates filth in the vicinity.

Their chief breeding places are accumulations of manure, but decaying vegetable or animal material and filth of any kind also afford them breeding places. Their food, however, is not limited to filth, and it is this circumstance which renders them dangerous, for after feeding on garbage of the most offensive description, they will convey that filth to foodstuffs used by human beings, and so contaminate that food.

The mischief done by flies is not confined merely to the conveyance of filth; they also carry disease germs from persons suffering from infectious disease to healthy persons. Flies are specially attracted to patients suffering from infectious sickness.

TO AVOID DANGER.

All house refuse should be burnt, or placed in proper receptacles and kept covered. These receptacles should be frequently and completely emptied.

Food of all descriptions should be carefully screened with muslin or with wire covers.

Food offered for sale should be properly screened. Therefore, in buying food give preference to shops where the food is properly protected against flies.

Keep all rooms, especially the kitchen, free from dirt.

Keep flies away from the sick, and kill every fly in the sick room. His body is covered with disease germs.

Sinks and gullies should be well flushed with water, and the drainage system kept in good order.

Any nuisance in the neighbourhood should be at once reported to the Medical Officer of Health, at the Municipal Offices, Dale Street, Liverpool.

INSPECTION OF STABLES AND REMOVAL OF MANURE.

The usual attention has been given and the necessity for the frequent removal of manure emphasized.

The applications to the City Engineer's Department for the removal of manure have been frequent, and the owners of stables have again been informed of the facilities offered by the Health Committee in the following terms:—

NOTICE.

REMOVAL OF MANURE FROM STABLES.

The Health Committee are very desirous that matter in the nature of Manure should be removed with as little delay as possible, and with this object in view, arrangements have been made with the City Engineer for its speedy removal.

On application to the City Engineer, Municipal Offices, Dale Street, Manure will be removed from stable yards as often as required, free of charge.

DISINFECTION OF MIDDENSTEADS.

The disinfection of middensteads has proceeded systematically, as in the previous year, the middensteads, after being emptied, have been disinfected by spraying with lime.

	<u>1911.</u>	<u>1912.</u>
Number of Visits to stables by District Sanitary Inspectors... ..	19,053	19,689
Number of disinfections of midden-steads	12,040	11,008

RAILWAY CARRIAGES.

	<u>1911.</u>	<u>1912.</u>
Number of Carriages Inspected	1,397	1,299

EXTERMINATION OF RATS.

A staff of rat-catchers is employed systematically in the destruction of rats.

All the rats caught are taken to Charters Street and drowned in petrol, and those not sent for bacteriological examination are subsequently placed in the Destructor furnace.

The premises dealt with are mainly buildings of the warehouse class, and business premises in the centre of the City. In a few instances Virus has been used by the Department, and also by owners, but the results have not altogether realised expectations. Dead or dying rats were subsequently found on adjoining premises to which the rats also had access. Trapping has the advantage that it permits of the identification of the species, the number of rats destroyed is known with certainty, and a bacteriological examination may be made if necessary.

Where traps and Virus have not been successful, tin trays containing a preparation resembling birdlime have been successfully used (see photograph). In the centre of the tray is placed bait suitable to the surroundings, or the tray may be placed on the track leading to that part of the building where the rat obtains his food and water. So far as the trays have been used, they have never failed, even in those places where food was plentiful; they, however, require attention.

The Mongoose is used by a few firms, but while in some instances they appear to be successful, in other cases they are said to have failed.

Rat catching in the public sewers by means of baited traps has been pursued for the past thirteen years with very satisfactory results, 55,767 rats having been caught up to December 31st, 1912.

To dispose of these rats, the usual practice has been to drown the rat and afterwards destroy the carcase by burning, but a number are now sent daily for bacteriological examination.

Various companies, such as the Zeba Company, perform a very useful work in connection with the destruction of rats, and a large number of rats were destroyed by men employed by these firms during the year.



RATS CAUGHT BY BIRDLIME ON SPECIAL TRAY.

The removal of the foul deep ashpit from the rear of dwellings and the substitution of suitable covered galvanized bins, whilst providing a sanitary improvement, has also undoubtedly been a material factor in the removal of rats from proximity to dwellings.

With regard to the general question of rats in connection with dwellings, for the past six months the district sanitary staff during their routine duties were instructed to carefully note and record in a special book, all dwelling-houses in which there was any complaint or evidence of rats in or about the dwelling. During this time, approximately 109,200 dwelling-houses have been visited by these officers, and only 124 houses have been recorded as being in any way affected by rats. In many of the cases defects in the drainage system led to the presence of the rodents, and when the defects were remedied the rats disappeared. In a few cases where the owner had failed to rid the premises of rats, the assistance of the rat catchers employed by the Health Committee was obtained.

A "Memorandum as to the Destruction of Rats" has been widely circulated, and the information contained therein has been found helpful.

The following statistics summarises the Inspectors' Reports. In those cases where the owners have tried and failed, the rat catchers employed by the Health Committee have rendered assistance.

No. of Warehouses Visited.	No. of Warehouses free from Rats.	Rats suspected.	Badly Infested.	Occasionally Seen.
843	426	259	77	81

Methods adopted for the extermination of rats—

Traps Used.	Cats Kept.	Poison Used.	Virus Used.	Mongoose Kept.	Private Rat Catcher employed.	Keeper advised where no method adopted.
134	249	12	167	9	21	57

THE WORK OF FEMALE SANITARY STAFF.

The work of the Women Inspectors has, as in former years, been directed chiefly to the care of the children of the City, and to the improvement of their home conditions. Towards this end the means employed have been:—

1. Visitation of infants whose births are notified under the Notification of Births Act.
2. House to house visitation in the poorest parts of the City.
3. Work in connection with the Medical Inspection of Schools.
4. Visiting of cases of neglect, sores, ringworm, &c., notified by the School Attendance Officers or School Teachers.

The visitation of births is carried out not only in the poorest parts of the town and among infants who are liable to neglect and mismanagement due to carelessness and drink, but also in the better districts where there are many young mothers grateful for visits from the Inspectors, and pleased to have the opportunity of discussing the various symptoms of their infants, of whose needs they are often so ignorant.

While the primary object of these visits is to give advice as to the care of the infants, the Inspectors do not lose sight of the needs of the “ex-babies,” who so often suffer in a greater degree than the youngest children from the ignorance of their mothers as to the kind of food, the amount of fresh air, &c., which is requisite for their well-being, and who, in consequence, are found to be anaemic, ricketty, and in a state of health which renders them peculiarly susceptible to attacks of illness.

The house to house visitation gives a further opportunity for impressing the necessity for care of these children on the parents, stress being laid on the advantages of fresh air, cleanliness, early hours, suitable food, and the need for special attention to the preparation and storage of the latter.

Supervision of the elder children is obtained through the schools, by means of visits paid in conjunction with the School Medical Officers, or on request of the teachers, and through visiting cases of neglect, &c., reported to the Department by the School Attendance Officers or teachers.

Care is taken to see that, where necessary, these cases receive medical attention, verminous and dirty children are cleansed at the public bath reserved for the purpose, houses are fumigated, families are kept under observation, and every effort is made to induce the parents and children to improve.

It is gratifying to note that improvement has taken place, and that the parents have in many cases proved themselves able and willing to keep their children and houses in accord with the higher standard of cleanliness now required of them.

In addition to this routine work, many cases of neglect and dirt, of poverty and illness, have been brought to the notice of the Inspectors from various sources, such as the City Police, the Education Department, charitable institutions, anonymous letters. In response to these, many old and dirty persons have been cleansed, cases of poverty have been placed on a better basis, and sick children have been removed to hospitals or convalescent homes.

The old people are found in very miserable circumstances, incapable of keeping themselves clean, and with no one on whom they can depend for help.

They are often extremely poor, as even if in receipt of the Old Age Pension they are without adequate means of support, having about 2s. weekly to provide food, clothing, and cleansing materials, after rent, coal and light are ensured; and it has therefore frequently been found advisable to remove them to workhouse or hospital.

During the year 1912, in conjunction with the Male Staff, special efforts were directed to the checking of the spread of infantile diarrhœa.

Attention was given to secure the prompt removal of nuisances or refuse: the houses in the districts where there had been outbreaks of the disease in previous summers were subjected to a rigorous visitation to ensure domestic cleanliness and protection of food. In addition to the distribution of the usual leaflets, stamped addressed postcards were left at the houses, to be forwarded to the Medical Officer of Health should a case of diarrhœa occur.

Cases notified by doctors in private practice, or from the dispensaries or hospitals, were visited and kept under supervision, with the object of inducing the parents to carry out the instructions given by the doctor, and suitable cases were removed to the ward set apart for the treatment of such patients at the City Hospital, Fazakerley.

The common lodging-houses for women have been kept under regular supervision by a member of the Female Staff.

The Female Inspectors thank the officers of the various charitable institutions and agencies for the very kind and valuable help given to them during the year 1912.

STATISTICS OF WORK DONE BY FEMALE SANITARY STAFF.

	1911.	1912.
Number of Visits to School Cases	25,983	27,615
" Re-visits " " " " " "	4,705	5,132
" Special School Enquiries	929	1,203
" Visits to Schools	2,110	2,670
" Hours spent in schools	2,712	2,834
" Children inspected in Schools	10,376	17,041
" References to Education Department ...	11,251	10,757
" " " District Sanitary Inspectors	477	949
" " " Lodging-house Inspectors...	31	22
" " " Central Relief Society ...	3	5
" " " City Engineer	42	29
" " " Water Engineer	23	34
" " " The Shelter, Islington ..	90	114
" " " Relieving Officer	4	2
" Visits to Lodging Houses	57	175
" Street Houses visited	2,202	2,498
" Court " " " " " " " " "	32	22
" Cellars visited	515	1,479
" Families found dirty	178	328
" Re-visits to Families	334	912
" Houses found dirty	697	1,568
" Cellars " " " " " " " " "	153	301
" Notices issued to cleanse dirty premises...	—	—
" " " " floors and } " " " " woodwork }	—	27
" " " to Parents of verminous } " " " Children }	919	479
" Verminous Children cleansed by Parents	474	519
" " " " Staff ...	1,105	962
" Special Visits	5,877	6,792
" Police Aided Association Visits	39	101
" Visits re Diarrhoea Cases	858	846
" " " " (fatal)	1,225	294
" Re-visits re " " " " " " "	—	351
" Visits Phthisis " " " " " " "	—	96
" Enquiries re Fire Guards	34	—
" Fire Guards distributed	27	18
" Informations	—	14
" Fined	—	3
" Acquitted or Withdrawn	—	11
Amount of Fines and Costs ...	£0 0 0	£1 4 0

A considerable amount of information is summarised in the following table :—

STATISTICS RELATING TO VISITS PAID IN CONNECTION WITH
NOTIFICATION OF BIRTHS ACT.

					<u>1911.</u>	<u>1912.</u>
Number of Births Notified	...	...	...	...	18,724	19,397
„ Visits relative to Births	...	...	...	...	16,367	16,208
„ Revisits „ „ „	...	...	...	...	1,673	1,145
„ children seen at addresses given	...	...	...	...	13,805	13,436
„ „ dead	...	...	...	...	864	650
„ „ could not be traced owing to removals	...	...	...	...	1,698	2,122
„ „ illegitimate	...	...	...	...	313	254
„ „ found to be clean	...	...	...	...	12,544	11,888
„ „ „ dirty	...	...	...	...	326	260
„ „ „ unwashed	...	...	...	...	931	1,288
„ mothers healthy	...	...	...	...	13,144	12,633
„ „ delicate	...	...	...	...	556	651
„ „ working	...	...	...	...	406	249
„ infants breast fed...	...	...	...	...	12,234	12,091
„ „ partly breast fed	...	...	...	...	669	616
„ „ artificially fed	...	...	...	...	902	729
„ „ fed on Cow's milk	...	...	...	...	643	562
„ „ „ Tinned milk	...	...	...	...	428	332
„ „ „ other Foods	...	...	...	...	499	451
„ instances in which Boat-shaped bottle is used...	...	...	...	...	860	826
„ „ „ Long-tube	...	...	...	...	210	135
„ families in which all children born are living...	...	...	...	...	5,082	4,803
„ „ „ half or over are living	...	...	...	...	5,775	5,572
„ „ „ under half are living...	...	...	...	...	660	835
„ „ „ child is first-born	...	...	...	...	2,212	2,104
„ families living in Court houses	...	...	...	...	598	520
„ „ „ Cellar dwellings	...	...	...	...	107	118
„ „ „ Corporation dwellings	...	...	...	...	206	351
„ families in which parents are Sober and careful	...	...	...	...	8,607	9,693
„ „ „ „ Drunken	...	...	...	...	674	650
„ „ „ „ Doubtful	...	...	...	...	4,448	2,961

INFECTIOUS DISEASE IN SCHOOLS.

The following tables show the age distribution and the monthly distribution of the school cases of infectious disease during the year:—

Table I.—SCHOOL CASES (Infectious Diseases).

AGE DISTRIBUTION—January–December, 1912.

DISEASE.	Under 5.	Under 6.	Under 7.	Total Under 7.	Under 8.	Under 9.	Under 10.	Under 11.	Under 12.	Under 13.	13 and over.	Total 7 years and upwards.	Grand Total.
Scarlet Fever.....	62	279	293	634	245	201	122	121	91	80	59	919	1553
Diphtheria	20	71	76	167	55	52	33	28	33	32	31	264	431
Measles	496	1961	1172	3629	441	206	129	100	62	66	33	1037	4666
Whooping Cough ...	264	1191	677	2132	215	50	28	21	11	20	9	354	2486
Chicken-pox	152	679	506	1337	299	140	83	43	38	19	26	648	1985
Mumps	30	132	124	286	100	83	66	54	48	41	49	441	727
Totals	1024	4313	2848	8185	1355	732	461	367	283	258	207	3663	11848
Per cent. of those on Roll.....	30·5	30·3	17·9	24·5	8·9	4·9	3·1	2·5	2·0	1·9	1·6	3·7	9·03

Table II.—SCHOOL CASES (Infectious Diseases).

MONTHLY DISTRIBUTION—January–December, 1912.

DISEASE.	January.	February.	March.	April.	May.	June.	* July.	August.	September.	October.	November.	December.	Total.
Scarlet Fever	172	132	137	111	123	141	95	121	141	144	116	120	1553
Diphtheria	37	41	44	38	37	21	27	27	45	45	35	34	431
Measles	116	194	266	229	650	543	66	126	507	845	645	479	4666
Whooping Cough ...	168	223	319	346	339	438	32	129	79	129	164	120	2486
Chicken-pox	130	115	205	132	311	226	18	41	101	269	274	163	1985
Mumps	57	82	93	77	50	67	21	19	41	68	94	58	727
Totals	680	787	1064	933	1510	1436	259	463	914	1500	1328	974	11848

* Holidays—July 6th–August 12th.

The following is a list of the schools closed during the year owing to the prevalence of Measles and other infectious disease amongst the scholars:—

Date of Notice.	School.	Department.	Nature of Disease.	Period of Closure.
1912.				
Feb. 16	St. Lawrence, Croylands St.	Infants	Measles, &c.	Three weeks
„ 21	Arnot Street Council	„	„	„
„ 21	Walton Lane Council	„	„	„
„ 27	Lister Drive Council	„	Measles and Whooping Cough	„
„ 27	Sheil Road Council	„	„	„
„ 28	Lawrence Road Council.....	„	„	„
„ 28	Loraine Street Council	„	„	„
Mar. 21	St. Peter's, Everton	„	Measles, &c.	Until 15th April
21	Aigburth C.E.	Girls'	Influenza ...	Until 27th Mar.
May 7	Anfield Road Council	Infants who have not previously had the disease	Measles	Until 28th May
„ 7	St. Anthony's, Newsham St.	Infants' ...	Measles and Whooping Cough	„
„ 7	Holy Trinity, Walton Breck	„	„	„
„ 7	Townsend Lane Council ...	„	„	„
„ 10	Penrhyn Street Council ...	„	Measles, &c.	Until 31st May
„ 10	St. John's, Sessions Road ...	„	„	„
„ 10	All Souls', Collingwood St.	„	„	„
„ 10	Roscommon Street Council	„	„	„
„ 15	St. Alphonsus', Back Great Mersey Street	„	„	Three weeks
„ 15	Holy Trinity, Ashwell St.	„	„	„
„ 15	Butler Street Council	„	„	„
„ 15	Walton Lane Council	„	„	„
„ 16	Daisy Street Council	„	„	„
„ 20	Greenbank Road Council ...	„	„	Until 8th June

Date of Notice.	School.	Department.	Nature of Disease.	Period of Closure.
1912. May 20	All Saints', Gt. Nelson St.	Infants' ...	Measles, &c.	Until 8th June
„ 23	St. Francis de Sales, Walton	„	„	Until 15th June
„ 24	All Infant Elementary Schools in the City	„	Measles and Whooping Cough	Until 17th June
June 21	Holy Cross, Fontenoy St. ...	„	„	Until after Summer Holidays
Oct. 24	All Infant Schools in the district bounded by Dale Street, London Road, Prescott Street, Kensington, Durning Road, Tunnel Road, Lodge Lane, Selton Park Road and thence to Aigburth Vale and Otterspool Road	„	Measles ...	Three weeks and for a further period of two weeks, viz. :— Until 30th Nov.
Oct. 31	St. Clare's, Garmoyle Road	„	Measles, &c.	Until 23rd Nov.
„ 31	St. Jude's, Low Hill	„	„	„
Nov. 14	St. Anne's, Derby Lane.....	„	„	Three weeks
„ 14	Barlow's Lane Council	„	„	„
„ 14	Our Lady's, Chesnut Grove	„	„	„
„ 14	Lawrence Road Council.....	„	„	„
„ 18	Venice Street Council.....	„	„	Until 9th Dec.
„ 21	Banks Road Council	„	Measles ...	Until 14th Dec.
„ 21	Duncombe Road Council ...	„	„	„
„ 21	Sudley Road Council	„	„	„
„ 21	National, Banks Road	„	„	„
„ 21	Victoria, Garston	„	„	„
„ 21	St. Francis, Garston	„	„	„
„ 21	St. Austin's, Grassendale ...	„	„	„
Dec. 2	Broadgreen Road Council ...	„	Measles, &c.	Until after Christmas Holidays
„ 2	St. John's, Thomas Lane, K.A.	„	„	„

Easter Holidays—5th April to 15th April.

Summer Holidays—6th July to 12th August.

Christmas Holidays—21st December to 6th January.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

The medical inspection of school-children has helped the administration of the Children Act of 1908, and the Liverpool Corporation (General Powers) Act of 1908, in dealing with children who are sent to school in a filthy and verminous condition. The condition is an illustration of the miseries to which neglected children of school age are subjected. To a less extent the work has also helped to bring to light many cases of neglect of children below school age, and although these children are unhappily not included within the scope of the Acts mentioned, an endeavour has been made to improve the conditions under which these also were living—a more difficult procedure, as they are not under the daily observation which obtains in the case of school children.

It would appear that the duty of making provision for the cleansing of verminous children devolves upon the Education Authority. The bulk of the work, however, has been undertaken solely by the Health Committee, who have authorised members of their staff to convey children to the Charters Street Disinfecting Station, where special washing accommodation is provided. Practically the entire cost of wages, transport, and washing accommodation has been provided by the Health Committee. The staff engaged, notably the Female Staff, has rendered most valuable assistance, many times supplementing their actual duties by supplying food and other necessities for the children.

So far as it has gone, the work has been good and effective, but it is very far from meeting the pressing necessities of the case, and it is absolutely necessary, in order to efficiently cope with it, that more suitable bathing establishments should be available.

At present bathing facilities are provided for children in various parts of the city, but it is questionable whether it would be desirable to identify these places as dépôts for the cleansing of verminous children, unless after some special adaptation for the purpose, such as the provision of separate washing places with separate entrances. This observation would apply alike to baths and wash-houses, and to washing places in connection with the Day Industrial Schools. It does not appear desirable to associate this particular measure with the ordinary bathing and washing accommodation for ordinary persons of cleanly habit.

It has been suggested that the whole of the cost should be borne by the Education Committee, but this does not appear to be altogether an equitable proposal, since large numbers of children of the poorest class, with whom the Education Committee have no concern whatever, are also neglected and verminous, and these will continue to be dealt with as heretofore under the instructions of the Health Committee.

Almost invariably with this form of child neglect, as with the somewhat analogous cases of neglecting to provide food, there is a history of drink. Again and again, the fact that the mother or father or both are heavy drinkers whenever money can be got, is noted in connection with this condition.

The benefits arising from a thorough cleansing of the body and clothes have been appreciated by the children themselves, and from time to time children present themselves at the Dépôt of their own accord, and request that they may be cleansed again.

The staff continue as before to visit cases of communicable skin and eye conditions, and the following table shows the number of school cases visited during the last three years:—

	1910.	1911.	1912.
Ringworm	2,521	2,310	1,810
Itch	724	612	600
Sore Eyes.....	3,439	3,143	2,675
Sore Heads, Impetigo, Eczema, &c. ...	5,116	5,833	6,467
Other Skin Diseases	1,916	868	707
Verminous cases	5,110	3,987	3,924
Neglect cases	3,909	3,596	5,097
Total.....	22,735	20,349	21,280

Although most of these cases are reported from the Education Department, yet a very large number are referred to the office of the Medical Officer of Health by nurses and others who are more or less in daily contact with children, such as teachers, visitors, &c., and also by private individuals.

CHILDREN ACT, 1908.

SECTION 122.

Number of Cases discovered on School Medical Inspection ...	6,517
„ „ First Notices issued	538
„ „ Children Cleansed by Parents	421
„ „ „ „ „ Female Staff	117
„ „ Prosecutions	14
„ „ Convictions	3
Amount of Fines and Costs	£1 4s. 0d.

PUBLIC ELEMENTARY SCHOOLS.

The Public Elementary Schools in the City are visited once each fortnight by the District Sanitary Inspectors, and an examination made of the sanitary conveniences. In all cases where the water-closets or latrines are found dirty or defective, an intimation is sent to the School Managers and the Director of Elementary Education, and in each case the necessary work has been done. The following table shows the number of visits, also the number of notices issued:—

	<u>1911.</u>	<u>1912.</u>
No. of Visits to Schools	2,554	2,794
„ found incorrect	78	77
„ Water-closets and latrines found dirty or defective	116	127
„ Notices issued for defects	107	94

NOTICES TO SCHOOL TEACHERS.

The arrangements have been continued with the Education Committee that notice shall be sent to the Committee and postcards to the Head Teachers of the various schools informing them when children from infected houses attend their schools. 12,420 cards were sent last year, as against 12,327 in the preceding year.

Administration of the **Factory and Workshop Act, 1901**, in
connection with
FACTORIES, WORKSHOPS, WORKPLACES & HOMEWORK.

The following Tables are prepared by request of the Secretary of State :—

1.—Inspection of Factories, Workshops and Workplaces.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (Including Factory Laundries.)	39	16	—
Workshops (Including Workshop Laundries.)	14,248	1,641	8
Workplaces (Other than outworkers' premises in- cluded in Part 3 of this Report.)	728	138	1
Total	15,015	1,795	9

2.—Defects Found in Factories, Workshops and Workplaces.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness	373	372	—	1
Want of ventilation	74	74	—	—
Overcrowding	3	3	—	—
Want of drainage of floors	9	9	—	—
Other nuisances	725	717	—	5
Sanitary accommodation { insufficient	25	24	—	1
	498	495	—	2
	44	44	—	—
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (S. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	210	310	—	—
Other offences (Excluding offences relating to outwork which are included in Part 3 of this Report).	—	—	—	—
Total	1,961	1,948	—	9

* Including those specified in Sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Act Amendment Act, 1890, has been adopted by the City Council. The standard of sufficiency and suitability of sanitary accommodation for persons employed in Factories and Workshops is in accordance with the Sanitary Accommodation Order of 4th February, 1903.

3—Home Work.

OUTWORKERS' LISTS, SECTION 107.																		OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.				
* NATURE OF WORK.	Lists received from Employers.										Prosecutions.				Number of Inspections of Outworkers' premises.	(14)	(15)	(16)	(17)	(18)	(19)				
	Twice in the year.		Once in the year.		Numbers of Addresses of Outworkers received from other Councils.						Numbers of Addresses of Outworkers forwarded to other Councils.		Prosecutions.												
					a Outworkers.		Lists.		a Outworkers.		Con-tractors.		Work-men.									Failing to keep or permit inspection of Lists.		Failing to send Lists.	
	a Lists.	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)													
Wearing Apparel—																									
(1) Making, &c.	532	1,853	876	22	45	13	50	100	45	—	—	—	902	—	—	—	—	—	—						
(2) Cleaning and Washing Sacks	—	—	4	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—						
Furniture and Upholstery ...	2	19	12	—	—	—	—	2	—	—	—	—	14	—	—	—	—	—	—						
Feather Sorting.....	2	4	2	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—						
Umbrellas, &c.	—	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—						
Paper Bags.....	2	5	14	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—	—						
Boxmaking.....	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—						
Basket Making	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—						
Electro-Plate	—	21	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—						
Making of Tents	2	1	3	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—						
Making of locks, latches & keys	—	2	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—						
” toys.....	—	4	4	—	—	—	—	1	—	—	—	—	5	—	—	—	—	—	—						
Processes incidental to above	—	31	4	—	—	—	—	4	—	—	—	—	4	—	—	—	—	—	—						
Total	540	1,959	920	22	45	13	50	107	45	—	—	—	949	—	—	—	—	—	—						

* Several Employers give out work of more than one of the classes specified in column 1. The lists are included among those in column 2 against the principal class *only*, but the outworkers are assigned in columns 3 and 4 into their respective classes.

The figures in columns 2, 3 and 4 are the *total* number of lists (received from employers who sent them both in February and August as required by the Act) and of the entries of names of outworkers in those lists. They are, therefore, double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name is often repeated.

4—Registered Workshops.			5.—Other Matters.		
Workshops on the Register (S. 131) at the end of the year.			Class.		
			Number.		
Workshops	...	...	...	Matters notified to H.M. Inspector of Factories:— Failure to affix Abstract of the Factory and Workshop Act (S. 133)	57
Cooking Kitchens of Restaurants	...	...	...	Action taken in matters referred by { H.M. Inspector as remediable Inspector ... under the Public Health Acts, but Reports (of action not under the Factory and Work- taken) sent to shop Act (S. 5) ... H.M. Inspector	137
Bakehouses	...	...	...	Other...	137
				Underground Bakehouses (S. 101)	19
				Certificates granted during the year	3
				In use at the end of year	160
Total number on Register			4,772		

FACTORY AND WORKSHOP ACT, 1901.

BAKEHOUSES.

The sanitary control of Bakehouses is dealt with under the Factory and Workshop Act and Public Health Acts; the regulations prescribed were set out in the Annual Report for 1904.

Thirty-seven bakehouses were added to the Register during 1912; two are new ground-floor bakehouses for bread bakers and confectioners; the remaining 35 are confectioners only.

During the year six plans were submitted and approved of for ground-floor bakehouses.

Number of Bakehouses on Register, 31st December, 1912	...	886
„ „ added to Register during 1912	...	37
„ „ struck off Register during 1912	...	27
„ Visits to Bakehouses	... ..	4,950
„ Notices issued for lime-washing and cleansing	...	186
„ „ „ to remedy sanitary defects	...	231
„ „ „ for deficient ventilation	...	24
„ „ „ to cease using a room as a bakehouse owing to bedroom being in direct communication	... ..	1
„ „ „ to cease to use as bakehouses places underground not in conformity with the Act	... ..	—
„ „ „ to remove drain from within bakehouse		—

All the above notices were complied with by the owners or occupiers.

UNDERGROUND BAKEHOUSES.

The number of underground bakehouses on the register at the end of the year was 187. Of this number 160 are in use, 21 are unoccupied, and 6 have been structurally altered and occupied for other purposes. Since the passing of the Act in 1901, two hundred and thirty-nine underground bakehouses have ceased to be used for baking purposes.

FACTORIES.

Factories include all places in which mechanical power is used.

The 39 Inspections of Factories referred to in the foregoing tables represent 18 Factories, which were inspected by the District Sanitary Inspectors principally as a result of complaints being received. The duty devolving upon the Health Department in connection with Factories is the enforcement of the provision of suitable and sufficient sanitary conveniences.

WORKSHOPS.

Workshops include any premises (not being Factories) in which manual labour is exercised by way of trade, or for purposes of gain in, or incidental to, the making, altering, repairing, finishing or adapting for sale of any article, and to or over which the employer of the persons working there has the right of access or control.

There were 3,524 workshops on the register at the end of the year, the majority of which are bootmakers, cabinet makers and joiners, dress-makers and milliners, laundries, smiths, and tailors; there are also workshops in connection with the following trades:—

Bamboo Workers
Basket Makers
Blindmakers
Block Makers
Bottlers
Bottle Washers
Box Makers
Brush Makers
Canned Goods

Cap Makers
Carvers and Gilders
Chair Makers
Chemists' Sundries
Coach Builders
Confectioners
Coopers
Cork Cutters
Cotton Sorters

Cycle and Bassinette Makers	Paint and Varnish Manufacturers
Dentists	Paper Cutters
Drysalters	Photographers
Electricians	Pickle and Sauce Manufacturers
Engravers	Picture Framers
Firewood Manufacturers	Pipe Mounters
Fish Curers	Plumbers
Flag Makers	Relief Stampers
French Polishers	Sack and Bag Makers
Furriers	Saddlers
Galvanizers	Sail and Tarpaulin Makers
Glass Blowers	Sign Writers
Ham Curers	Trunk and Portmanteau Makers
Hatters	Umbrella Makers
Image Makers	Underclothing Makers
Knitters	Upholsterers
Marble Masons	Watchmakers and Jewellers
Marine Stores	Wheelwrights
Mattress and Bed Makers	Wig Makers
Metal Polish Makers	Wire Workers
Musical Instrument Makers	etc., etc., etc.
Opticians	

Every workshop and workplace is visited at least once each year.

The Workshop Inspectors made 9,298 inspections of workshops, and on 2,738 occasions the premises were found to be incorrect. The number of inspections in 1911 was 9,658. (This does not include bakehouse workshops visited by the Bakehouse Inspector.) In addition, 849 visits were made to premises to ascertain if they were workshops, and measurements were taken of 54 workrooms.

There are approximately 300 basement workshops, but all of them comply with the essential requirements in respect to light and ventilation, and are, in the main, situated in the centre of the City.

A number of new workshops have been added to the Register.

WORKPLACES.

Workplaces include any place where work is done permanently, and where people assemble together to do work permanently of some kind or other. The kitchens of restaurants, &c., though they are not workshops, come within the meaning of the term "workplace."

728 visits were paid during the year to the kitchens of restaurants by the Workshop Inspectors; on 83 occasions the premises were incorrect. The number of visits in 1911 was 1,035. Attention is being particularly paid to the nuisance arising from the removal of swill, and the Inspectors make a practice of visiting the premises early in the day when the swill is generally removed.

The nuisances found were in most instances remedied on notices being served, but in several cases it was necessary to take further proceedings, with the result that fines amounting to £3 0s. 6d. were inflicted. The fines in the previous year amounted to £1 17s. 0d.

Several defects were found which could not be dealt with by this Department, and they were referred to the City Engineer, Water Engineer or the Building Surveyor.

HOME WORK.

In accordance with Section 107 of the Factory and Workshop Act, 554 lists of outworkers were received (277 in February, and 277 in August) giving the names and addresses of 2,937 employees. The number of lists received in 1911 was 596, containing the names of 3,256 employees.

On examination of the lists they were found to contain 2,002 Workshops or Domestic Workshops already on the Register (1,012 in February, and 990 in August). The other addresses, excepting those situated outside the City, were visited by the District Sanitary Staff,

and in several instances the premises were found to be new workshops or Domestic Workshops, *i.e.*, where the work done constituted the sole or principal means of living of the family. These were placed on the Workshop Register, to be visited periodically by the Workshop Inspectors. The home work in 935 cases was found to be an additional source of income only.

<u>FURNITURE REMOVERS' VANS.</u>						1911.	1912.
Number of Visits	...	...	...	...	...	<u>97</u>	<u>117</u>
„ Vans examined			...	...	...	55	98
„ found correct	...	...	...	...	...	52	95

In each case where the vans or wraps were found dirty, a notice was served on the owner to cleanse them.

SHOPS ACT, 1912

This Act, which consolidates the previous enactments, came into operation on May 1st, 1912, and ensures that every shop assistant shall have a weekly half-holiday, regulates their meal-times, fixes the maximum number of hours to be worked by persons under the age of 18 employed in or about a shop, and also provides for the provision of seats for the female shop assistants.

With certain exceptions, every shop is to be closed for the serving of customers not later than one o'clock in the afternoon on one week-day in every week. The Act also enables the Local Authority to make an order fixing the day on which the shop is to be closed, or they may, by Order, exempt any particular class of shops in any area from the provisions of the Act in respect to closing.

Three Orders have been made by the Health Committee under the provisions of Section 4.

The Liverpool (Central Area) Exemption Order applies to all shops within the area bounded by the streets mentioned in the Order. The several retail trades or businesses which are wholly exempted from the provisions of this Act are also mentioned in the Order.

To carry out the provisions of this Act and the Orders made thereunder, it has been necessary to appoint three extra Inspectors (two male and one female), in addition to the three Workshop Inspectors who have for several years devoted a small portion of their time in carrying out the provisions of the Shops Act.

As the closing of shops on one half-day each week slightly interfered with the routine inspection of bakehouses, the part services of this Officer have also been available. To prevent overlapping, these Inspectors also carry out the provisions of the Employment of Children Act, 1903, and the Bye-laws made by the Health Committee under that Act.

As it is illegal for any street traders to carry on any business which contravenes the Order, the District Sanitary Inspectors assist the Shops Act Inspectors by noting the names and addresses of any such persons found selling prohibited articles.

It has been necessary to retain the services of a temporary clerk to assist in the extra clerical work, and the formation of registers.

Whilst the existing legislation does not control the hours of boys between 14 and 18 years of age employed on carriers' vans and carts, a careful enquiry has been made in respect to 513 young persons so employed. It was found that, with one exception, the hours worked had not exceeded the maximum allowed by the Act, for young persons of that age, in or about a shop.

SHOPS ACT, 1912.

STATISTICS SINCE THE ACT CAME INTO FORCE.

Day Visits (Statements)

No. of Shops visited	...	...	...	...	...	...	...	8,390
No. of Shops employing young persons				...	...	...	...	2,038
No. of young persons employed		...	...	...	...	...	...	2,851
No. of Shops {	Young persons' hours incorrect	...	...	...	...	...	...	29
	No extract of Act exhibited	...	...	...	...	...	...	947
	Employing Assistants	...	...	...	...	...	...	3,048
No. of male assistants employed (including any under 18 years of age)...								5,375
No. of female assistants employed (including any under 18 years of age)								3,293
No. of Shops {	Seats incorrect	...	...	...	...	...	...	14
	Notices, <i>re</i> Assistants' Half-holiday, incorrect				...	...	...	594
	Assistants' Half-holiday incorrect			...	...	...	...	47
	Meal times incorrect	...	...	...	...	...	...	3
	Notices, <i>re</i> closing, incorrect	...	...	...	...	...	...	591
	Contravening Act or Orders	...	...	...	...	...	...	29
	Revisits.							
	Revisited (day)	...	...	...	...	...	...	1,404
	Revisited (after 6 p.m.)		...	...	...	...	...	1,358
	Young persons' hours incorrect			...	...	...	...	17
	No extract of Act exhibited	...	...	...	...	...	...	199
	Seats incorrect	...	...	...	...	...	...	—
	Notices, <i>re</i> Assistants' Half-holiday, incorrect				...	...	...	176
Assistants' Half-holiday incorrect			...	...	...	...	35	
Meal times incorrect	...	...	...	...	...	...	—
Closing incorrect	...	...	...	...	...	...	21	
Notices, <i>re</i> closing, incorrect	...	...	...	...	...	...	36	

Special Visits *re* Closing Orders.

No. of Shops visited	...	...	...	...	...	...	...	14,375
No. of Shops not closed		...	...	...	...	...	...	1,521
No. of Shops' notices incorrect			...	...	...	...	...	2,272

INFORMATIONS LAID UNDER THE SHOPS ACT, 1912.

Number of Informations for not exhibiting notice <i>re</i> Assistant's							
Half Holiday	...	...	...	...	...	...	3
Number of Informations for not exhibiting notice <i>re</i> hours of							
young persons	...	...	...	...	...	...	1
Number of Informations under Half Holiday Order No. 1 for							
not closing on either Wednesday or Saturday	...	...	...	...	...	...	14
Number of Informations under Half Holiday Order No. 2 for							
not closing either Wednesday or Saturday	...	...	...	...	...	...	1
Number Fined	...	...	...	...	...	...	14
Number Acquitted or Withdrawn	...	...	...	...	...	...	5
Fines and Costs	...	...	...	...	...	...	£4 6s. 0d.

STATISTICS PRIOR TO THE ADOPTION OF SHOPS ACT, 1912.

Number of Shops Visited (day).	Number of Shops found without Notice of the Act.	Number of Shops, Hours Excessive.	Number of Shops Re-visited (day) <i>re</i> Half- Holiday.	Number of Shops Visited at night.	Number of Shops Re-visited at night. <i>re</i> Notices.	Number of Shops found Incorrect <i>re</i> Closing.	SEATS. —— Visits for the purposes of the Act.	SEATS. —— Found Incorrect.
3,527	218	11	5,070	26	3,532	96	349	14

EMPLOYMENT OF CHILDREN ACT, 1903.

This Act is intended for the limitation and regulation of child labour, and affects children of school age, viz., under 14 years of age.

The Act contains clauses prohibiting children carrying burdens likely to cause them injury, and from being employed in any occupation likely to be injurious to their lives, limbs, health or education.

Another clause prohibits children who are working half-time under the Factory and Workshop Act from being employed in any other occupation.

There are other clauses relating to children engaged in street trading. These have been dealt with by the Watch Committee, and are enforced by the Police.

The following table shows the periods of the day at which visits were made and result of the action taken:—

	No. of Visits.		No. of Contraventions Found.	
	1911.	1912.	1911.	1912.
Before 7 a.m. or after 8-15 a.m. ...	229	91	19	10
„ 12-30 p.m. or after 1-15 p.m. ...	14	7	—	—
„ 5 p.m. (or 5-30 p.m. to barbers' shops) ...	153	60	23	17
After 8 p.m. (or 8-30 p.m. to barbers' shops)	666	685	76	75
Saturdays before 10 a.m. (to barbers' shops)	26	14	6	4
Saturday <i>re</i> Maximum Hours (each shop is usually visited 4 times)	3,424	6,046	101	99
Saturday after 9 p.m.	68	30	18	7
Sunday after 9 a.m.	123	116	34	40
„ before 3 p.m. or after 4 p.m.	32	134	1	4
Total visits... ..	4,735	7,183	278	256
		1911.	1912.	
Number of Informations		93	90	
„ of Convictions		77	78	
Amount of Fines and Costs ...	£71	17 0	£84	18 0

Of the 7,183 visits paid during the year, 1,101 were visits in connection with cases of illegal employment discovered during the Medical Inspection of School Children.

MIDWIVES ACT, 1902.

At the close of 1912 there were, so far as could be ascertained, 328 women in Liverpool qualified under the Midwives Act to attend confinements.

During the year, four midwives died and 40 left the City; against these numbers 25 were added to the Roll by the Central Midwives' Board and 4 came into the City from outside districts.

The following table gives the qualifications of these women, and also a comparison with the previous year:—

				<u>1911.</u>	<u>1912.</u>
Central Midwives' Board Examination ...	...	...	...	148	141
Ladies' Charity and Lying-in Hospital ...	...	...	...	92	86
London Obstetrical Society ...	...	...	...	48	44
Rotunda Hospital, Dublin ...	...	...	...	3	4
Glasgow Maternity Hospital ...	...	...	...	2	2
City of London Lying-in Hospital ...	...	...	...	1	1
Manchester Maternity Hospital ...	...	...	...	2	2
National Maternity Hospital, Dublin ...	...	...	...	2	0
Coombe Lying-in Hospital, Dublin ...	...	...	...	2	2
St. Mary's Hospital, Manchester ...	...	...	...	1	1
Dundee Maternity Hospital ...	...	...	...	1	1
In bona fide practice prior to 31st July, 1901 ...			...	41	44
				<hr style="width: 10%; margin: 0 auto;"/>	<hr style="width: 10%; margin: 0 auto;"/>
				343	328
				<hr style="width: 10%; margin: 0 auto;"/>	<hr style="width: 10%; margin: 0 auto;"/>

Of the 328 Midwives residing in Liverpool, 199 are in private practice as midwives, 29 are employed in Public Institutions as midwives or maternity nurses, and 100 are employed as private maternity nurses

under the supervision of a medical practitioner or in some other employment.

A total of 17,373 births were attended by women out of a total of 22,233 births which occurred in the City during the year 1912, being 78·14 per cent. Included in this number are 2,198 births attended by midwives on the Staff of the Ladies' Charity, and 35 births attended by uncertified women. This last figure is most satisfactory when compared with 554 which is the average number attended in this manner during the previous three years.

The extent of the practice of individual midwives varies very considerably, one midwife having attended over 500 cases, while 88 attended less than 50 cases. The average was 80 cases to each midwife in practice.

STATEMENT OF NOTIFICATIONS OF BIRTHS RECEIVED DURING
THE YEARS:—

	1911.		1912.	
Notifications Received from	Births.	Per centage of Births Registered in the City.	Births.	Per centage of Births Registered in the City.
Certified Midwives	14,027	62·36	14,828	66·70
Medical Attendants.....	1,622	7·21	1,641	7·38
Poor Law Institutions	749	3·31	727	3·27
Ladies' } Maternity Hospital...	514	2·29	487	2·19
Charity } District Homes	1,620	7·21	1,474	6·63
Uncertified Women.....	58	·26	8	·03
Parents	134	·60	149	·67
	18,724	83·24	19,314	86·87

Total Number of Births registered in the City	}	1911	—	22,493
		1912	—	22,233

STILL BIRTHS.

The number of still births notified by midwives was 380, which is at the rate of 2·52 per cent. of the births attended. The prevalence of still births in the practice of midwives varies very much, the highest rate being 12·5 per cent., the lowest being 0·60 per cent., in the practice of midwives attending over 20 confinements per year. In no case does a midwife give a certificate of still birth unless she is present at the time of the birth; she is instructed that if the birth should take place before her arrival she must report the matter to the Coroner, who, upon inquiry, grants a certificate for the burial of the body. The Medical Officer of Health has arranged for still births to be received at the Mortuary, Ford Street, where, if the parent is unable to pay the fee the body is taken charge of and arrangements made for its burial.

The following figures give the months of pregnancy during which the still births took place, viz.:—

							1912.
Sixth month	...	...	...	...	...	...	33
Seventh month	...	...	..	...	...	...	84
Eighth month	..	..	...	...	...	...	63
Ninth month	...	...	...	...	..	...	199
Not specified	...	...	...	...	...	...	1
Total							380

MEDICAL ASSISTANCE.

Under the Rules issued by the Central Midwives' Board, a midwife must advise that medical assistance shall be called in where there is any abnormal circumstance connected with the confinement.

The following Table gives the details of the complications for which medical assistance was required during the past year:—

Abnormal Presentation—	1912.
Brow or Face Presentation	34
Occipito-posterior Presentation	19
Transverse Presentation	45
Breech Presentation	28
Foot Presentation	10
Cord Presentation	26
Placenta Prævia	19
Deformed Pelvis	29
Ante-partum Hæmorrhage	51
Post-partum Hæmorrhage	59
Retained Placenta or Membranes	96
Ruptured Perinæum	66
Multiple Births	10
Malformation of Child	10
Abortion or Premature Birth	56
Pyrexia	47
Eclampsia	21
Ophthalmia	3
Obstructed Labour, Uterine Inertia, or requiring Instrumental Assistance	453
Various or not definitely specified	136
Total	<u>1218</u>

The increase in the number of notifications over previous years would show that midwives are availing themselves of medical assistance to a larger extent through following closely the requirements of the rules of the Central Midwives' Board as to sending for Medical Aid.

The Health Committee on the 1st September, 1904, on the advice of the Medical Officer of Health, consented to pay a fee of one guinea for every case where emergency assistance had been rendered by a medical practitioner at the request of a midwife, and in which the fee could not be recovered either from the patient's friends or from the Boards of

Guardians. Where part payment is made from these sources, the Health Committee have made up the balance. This arrangement has given general satisfaction. The numbers of references to medical men vary slightly each year. The total amount paid during each of the last two years has been :—

						£	s.	d.
1911	...	...	...	...	...	513	2	0
1912	...	...	...	...	...	520	17	6

It may be mentioned that the Medical Officer of Health conferred with the members of the Liverpool Medical Institution when the Act was passed, upon the question of the fee, since it was obvious that some emergencies would involve much greater time and anxiety than others, but the uniform fee was thought the best, as it would be impossible to discriminate.

It must be remembered that this fee is for emergency assistance only, and it does not involve any subsequent attendance by the medical man. If he chooses to attend he has no additional claim upon the Health Committee.

The National Insurance Act which came into force in July this year contains some important provisions comprised in the sections relating to Maternity Benefit. The sum of Thirty shillings is provided under this Act in respect of each confinement, but the benefit does not come into operation until January 15th, 1913.

There is no doubt that this benefit will be of great assistance to the poorer classes in providing the necessary clothing and food during the time of confinement.

The Act also provides that a doctor who is called in on emergency by a midwife shall be entitled to a fee to be paid out of the 30s. Maternity Benefit grant.

It is difficult to estimate the exact effect that this Maternity Benefit will have on the practice amongst midwives, and no doubt certain adjustments will have to be made in relation to the payment of doctors who attend in cases of emergency. The whole subject is receiving careful consideration from the various parties concerned and no doubt adjustments will be reached to enable the fullest advantages of the Act to be realised.

The number of visits paid during the year for the purpose of investigating accounts for emergency assistance was 866; it may be mentioned that these visits have formed a very useful link between the midwives and the Medical Officer's Department, as by this means any special circumstances are brought to light.

PUERPERAL FEVER.

The number of cases of Puerperal Fever notified to the Medical Officer of Health during the year was 37 of which 15 proved fatal. This gives a death-rate of 0·68 per 1,000 births in the City, a decrease on the figure for last year.

Thirty cases were removed to Hospital:—1 to Brownlow Hill Infirmary; 6 to Mill Road Infirmary; 20 to the City Hospital, Fazakerley; 1 to Toxteth Workhouse; 1 to the Maternity Hospital; and 1 to Walton Workhouse.

After the usual investigations were made, 23 cases, of which 11 died, were found to have occurred in the practice of midwives. One midwife had 4 cases and 2 midwives had 2 cases each.

The following table shows the Annual Rate of Mortality per 1,000 of the total births since the year 1907.

Year.	Total number of births in the City.	Total number of :—		Death rate per 1,000 births.	Removed to City Hospital Fazakerley.
		Cases.	Deaths.		
1907	23,654	58	12	0·50	10
1908	23,891	52	16	0·67	19
1909	23,591	62	21	0·89	22
1910	23,054	41	9	0·39	11
1911	22,493	52	21	0·93	27
1912	22,233	37	15	0·68	20

The first removals to Fazakerley Hospital took place in March, 1907.

Every precaution was taken to prevent the disease being conveyed to other women, and it is gratifying to remark that much greater care is now taken by midwives in cleansing themselves and their clothing and appliances than in previous years.

The keeping of temperature charts during the puerperal period has proved of immense benefit in helping to direct the attention of the midwife to the possibility of puerperal complications, and enables her to recognise the necessity of calling in medical assistance at the earliest indication of danger.

ROUTINE VISITS TO MIDWIVES.

Rule 23 laid down by the Central Midwives' Board states as follows :—
 “ The Local Supervising Authority shall make arrangements to secure
 “ a proper inspection of the Register of cases, bag of appliances, etc., of
 “ every midwife practising in the district of such authority, and when
 “ thought necessary, an inspection of her place of residence, and an
 “ investigation of her mode of practice.”

In accordance with this Rule, 1,461 visits were paid, and a generally satisfactory condition is to be reported. The general condition of the homes of midwives has shown marked improvement, as also their personal cleanliness.

The adoption of the Notification of Births Act, which renders it obligatory on the part of the medical attendant or midwife, as well as the father of the child, to notify the occurrence of a birth, has been a very valuable aid to the working of the Midwives Act.

The midwives who were admitted under Rule B2 have shown great willingness to fall in with the requirements of the Rules of the Central Midwives' Board, and their general work reveals much improvement.

During the year the Rules framed by the Central Midwives' Board were revised and a new edition issued. This contains among other additions the important Rule No. 13, which states that "the midwife shall take and record the pulse and temperature of the patient on each visit." It may be stated that this Rule has been to a great extent anticipated in Liverpool, inasmuch as Temperature Charts have been provided for, and used by, midwives for the last four years, with very satisfactory results. Instruction in the recording of the pulse has been found in some instances to be necessary, but the midwives as a whole have always shown great aptitude in responding to the requirement.

OPHTHALMIA NEONATORUM.

This is an extremely serious affection which attacks the eyes of newly-born infants. It is usually caused by the entrance of certain bacteria into the eyes at the time of birth. The symptoms, redness and swelling of the eyelids, make their appearance in about three or four days after birth, and the disease frequently runs such an acute course that if proper treatment is not applied immediately, the eyes are permanently damaged and the child is rendered blind for life.

The extent to which this disease is prevalent in this country is shown by the statements made by well-known authorities that over one-third of the inmates of schools for the blind have lost their sight as a result of this disease. On the other hand, it is no less certain that if the disease is

brought under efficient treatment when the symptoms first make their appearance the eyes can be saved from serious injury and the sight preserved.

Under the Midwives Act, midwives are compelled to inform the Local Supervising Authority (in Liverpool the Health Authority) of such cases, and to call in medical assistance. Much care has been taken to impress upon midwives the serious character of this disease, and they have been very quick to recognise it, so that now the majority of cases have prompt medical advice.

Since 1910 the Health Committee have had a Female Inspector with special Hospital training on the staff of the Medical Officer of Health for the purpose of dealing with this disease. Her duties consist in visiting all the cases which are notified to the Medical Officer and in taking such measures as are available for ensuring that the affected infants have prompt medical attention. An essential point in the treatment of this disease is that of constant and careful nursing, consequently a large portion of the Inspector's time is occupied in carrying out the treatment advised by the Hospital Authorities and by private medical practitioners.

The following figures give some details as to the sources of information and character of the cases dealt with during the year:—

Total number of cases brought to the notice of the Department 394.

(1)	Reported by Midwives	324
(2)	do. Doctors and Eye Hospital	19
(3)	do. Female Inspectors	47
(4)	do. in other ways	4

The above cases consisted of:—

(1)	Mild cases	238
(2)	Severe cases	91
(3)	Not Ophthalmia Neonatorum	65

The following is the age distribution, viz.:—

Under one week	276
One week to one month	53

During the year 2,417 visits were made as follows:—

266 Cases required less than 10 visits.

51 Cases required between 10 and 20 visits.

10 Cases required between 30 and 40 visits.

2 Cases required over 90 visits.

32 Cases required more than 1 visit in 24 hours at some period of disease.

The majority of the cases which went to Hospital, either as out-patients or who were admitted as in-patients, were treated at St. Paul's Hospital.

The authorities of this Hospital reserve 9 beds and 9 cots for this disease, so that infants who require constant supervision and treatment can be admitted with their mothers, and are therefore not deprived of the necessary maternal nourishment and care.

The results of this work have been most satisfactory, as is shown by the following figures:—

Number of cases treated in their homes	134
Do. do. sent to Hospital as Out-patients...	99
Do. do. admitted to Hospital	35
Do. do. requiring supervision only	61

It is interesting to note that in 17 cases previous children in the family had been similarly affected.

Number of days between the Onset of the disease and the date on which the Case was seen:—

Within :—	24 Hours	2 Days	3 Days	4 Days	5 Days	6 Days	7 Days	8 Days	9 Days	10 Days & over	Total
Severe cases	43	17	9	5	6	1	1	1	2	6	91
Mild cases...	76	49	42	21	11	12	5	9	5	8	238

Number of cases cured	293
Do. do. sight slightly impaired in one eye...	2
Do. do. blind in one eye	1
Do. do. not requiring supervision of In- specter	33

The case of blindness in one eye was due to delay by the parents in having the child brought under medical treatment.

In addition to the work shown above there were twenty-one cases of children over twelve months of age, and the number of visits paid in connection with these was 116.

THE AMBULANCE AND DISINFECTING STAFF.

The following table shows the number of patients removed to Hospitals during 1912, by Officers of the Ambulance Staff, and the Hospitals to which they were taken:—

City Hospital North, Netherfield Road.	City Hospital South, Grafton Street.	City Hospital, Park Hill.	Brownlow Hill.	City Hospital East, Mill Lane.	Royal Infirmary.	Smithdown Road.	Southern Hospital.	City Hospital, Fazakerley.	Port Sanitary Hospital.	David Lewis Northern Hospital.	Fazakerley Annexe.	Hahnemann Hospital.	Total.
863	713	595	7	871	2	—	4	1045	3	—	527	1	4,631

Details of the methods employed have been given in previous Annual Reports, in which also the general procedure in disinfection has been explained.

In 1910, the Health Committee provided a 20 horse-power Motor Ambulance to be used as a conveyance for the removal into hospital of patients suffering from infectious disease.

Since the introduction of this ambulance, patients have been removed much more speedily and comfortably to the City Hospitals than would have been the case had they been removed by horse Ambulance.

This ambulance has been in use about 16 hours a day, it is doing the work of four horses, and so far has given entire satisfaction.

INFECTED PREMISES STRIPPED AND DISINFECTED BY
STRIPPING STAFF.

							<u>1911.</u>	<u>1912.</u>
Houses	...	...	...	...	..	...	9,461	9,876
Rooms Stripped or sprayed with solution of Perchloride of Mercury or Formaline	...	...	...	...			27,204	25,775
„ Disinfected with sulphurous gas	...	...	...	...			10,055	9,024
Number of Notes to Owners after stripping and cleansing							2,499	2,214
„ Visits by Superintendent of Staff	...	...	...	...			1,906	1,930
„ Enquiries respecting disinfection	...	...	...	...			11,479	10,944

LIBRARY BOOKS FOUND IN INFECTED HOUSES.

							<u>1911.</u>	<u>1912.</u>
Number of Library Books disinfected	...	...	...	...			1,934	1,986
„ „ „ destroyed	...	...	...	...			41	20

Compensation was paid for all Books destroyed.

For a number of years it has been the practice to inquire for library books at every house where infectious disease is reported, and to remove from the house any books found. The inquiry also determines whether or not the books have been used by the patient, or have been in the sick room, and incidentally the character of the house and of the occupants is reported upon, and further information for other purposes ascertained.

The manner in which the books are dealt with is explained in the Report for 1909.

THE DISINFECTING APPARATUS.

The number of articles disinfected at the various apparatus during the year amounted to 61,614, and consisted of the following articles:—

DATE. 1912.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	No. of Pieces of Wearing Apparel.	Total Number of Articles.
January	448	46	2,577	1,544	4,615
February	451	51	2,561	1,900	4,963
March	786	48	3,485	2,824	7,143
April	411	37	2,596	3,443	6,487
May	374	33	2,195	4,187	6,789
June	402	19	2,386	2,689	5,496
July	365	43	1,971	884	3,263
August	393	29	1,978	1,432	3,832
September	403	33	2,051	1,995	4,482
October	420	39	2,271	1,557	4,287
November	516	50	3,129	2,080	5,775
December	455	19	2,424	1,584	44,82
Totals	5,424	447	29,624	26,119	61,614

The number of articles destroyed at the various apparatus during the year amounted to 1,635, compensation being paid in conformity with the provisions of the Public Health Act. Details are as follows:—

DATE. 1912.	Number of Beds.	Number of Mattresses.	Number of Pieces of Bedding.	No. of Pieces of Wearing Apparel.	Total Number of Articles.
January	28	16	86	—	130
February	35	18	109	—	162
March	30	30	114	—	174
April	22	28	101	—	151
May	24	23	85	—	132
June	29	10	92	1	132
July	24	26	83	—	133
August	19	14	54	2	89
September	24	18	93	5	140
October	14	26	65	—	105
November	20	34	134	—	188
December	34	5	60	—	99
Totals	303	248	1,076	8	1,635

PRINCE'S DOCK MORTUARY.

The Mortuary at the Prince's Dock is for the reception of the bodies of persons who have been drowned, killed, or found dead, and upon which the Coroner desires to hold inquests. Bodies are taken to this Mortuary by the police, and when it may be necessary to make post-mortem examinations, any medical gentleman may have the assistance of an inspector on sending a communication to the Ambulance Superintendence, 54, Gascoyne Street.

BODIES REMOVED TO THE PRINCE'S DOCK MORTUARY.		
Number from River.	Number from City.	Total.
5	285	290

FORD STREET MORTUARY AND DISTRICT MORTUARIES.

BODIES REMOVED TO MORTUARIES.						
Green Lane.	Lark Lane.	Wavertree.	Ford Street.	Park Hill.	Smithdown Road.	TOTAL.
—	2	—	254	—	—	256

The Mortuary in Ford Street is provided for the reception of bodies, which cannot be kept at the homes in which death had taken place, without injury to the health of the inmates. The address of the caretaker is 6, Pickering Street.

The District Mortuaries, it will be seen, are seldom used. For the convenience of juries, as well as for other reasons, it is preferable that bodies should be conveyed to the Central Mortuaries.

The method of transport of the bodies of persons killed, or found dead in the street, has been more adequately provided for.

The Health Committee have authorised the Head Constable to make arrangements with certain firms of undertakers in suitable parts of the City, to supply a hearse on short notice, together with a shell coffin, for these purposes.

This plan is expeditious, inasmuch as only short distances have to be travelled by the hearse to the place where the body is lying; it is working well.

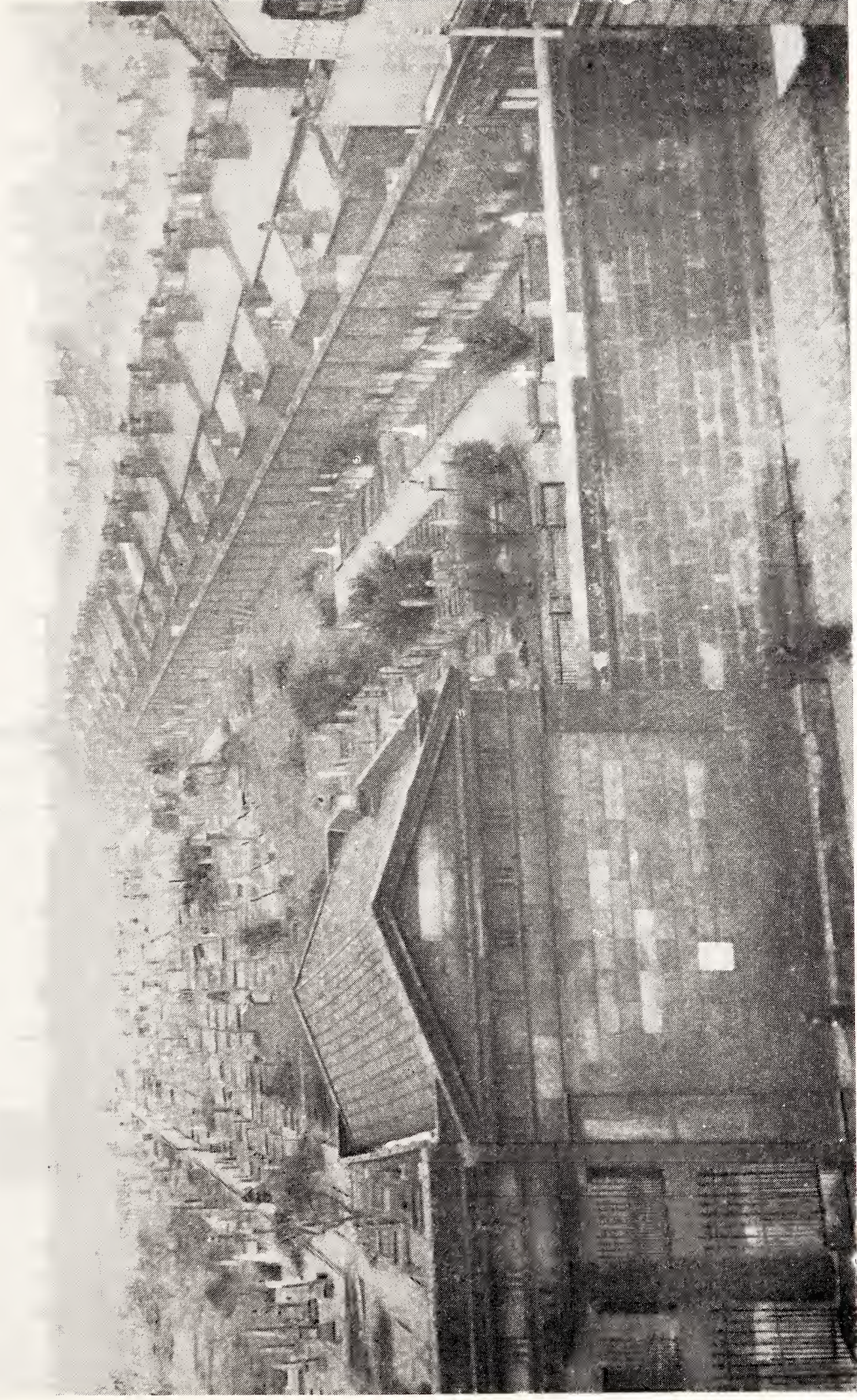
CREMATORIUM.

The Crematorium in Anfield Cemetery is availed of by an increasing number of persons as a means of reverent disposal of the dead by cremation, but the system has not yet found the favour which it does in many important centres of population throughout Europe and America.

When the Corporation became the Burial Authority for the City, the suggestion which had been previously made of transferring the Crematorium to the control of the Burials Committee was carried out. Subsequently, in October, 1908, the administration was taken over by the Crematorium Sub-Committee. In order, however, that the continuity of the administration should be preserved, the late Mr. Alfred Holt, one of the original founders, and Dr. Nicholson, the former Medical Referee, were asked to assist the Sub-Committee as Advisory Members, and this they kindly consented to do.

Since 1896, when the Crematorium was opened, until the end of 1912, 603 cremations have taken place. The following table gives the number for each year.

1896.....	2
1897.....	10
1898.....	27
1899.....	23
1900.....	40
1901.....	40
1902.....	54
1903.....	35
1904.. ..	40
1905.....	35
1906.....	46
1907.....	34
1908.....	32
1909.....	46
1910.....	37
1911.....	50
1912.....	52
<hr/>	
603	
<hr/>	



NECROPOLIS BURIAL GROUND, PRIOR TO LAYING OUT AS A GARDEN.



NECROPOLIS BURIAL GROUND, PRIOR TO LAYING OUT AS A GARDEN.



The charge for a Cremation is £5 5s., and arrangements can be made for the retention of the ashes in a suitable receptacle the in Columbarium attached to the building, or they can be disposed of by burial or in other ways to meet the wishes of those concerned.

The Crematorium buildings are open to the Public from 9-30 a.m. to 4 p.m. on Week-days, and from 2 p.m. to 4 p.m. on Sundays. All information, with the necessary forms, may be obtained from the Manager at the Crematorium, by letter or telephone (Telephone No. 267, Anfield), and at the Public Health Department, Municipal Buildings.

PROCEEDINGS UNDER THE DISEASES OF
ANIMALS ACTS, 1894 TO 1903.

The duties of the Inspectors under the Diseases of Animals Acts, 1894 to 1903 have been explained in the Report for 1909.

The accompanying table gives the result of the visits made under the Acts or under the Orders of the Board of Agriculture:—

	<u>1911.</u>	<u>1912.</u>
Number of Visits and revisits to Railway Stations, including inspections made on Sundays ...	3,332	2,866
„ Inspections and reinspections of Pens ...	107,787	93,897
„ found clean	79,314	77,841
„ „ dirty and cleansed before being used...	28,473	16,056
„ Inspections and reinspections of Trucks ...	53,732	36,465
„ found clean	45,876	30,817
„ found dirty and cleansed before being used...	7,272	5,181
„ „ leaving the City before being cleansed,	584	467
„ Inspections and reinspections of Horse Boxes	1,584	1,697
„ found clean	1,175	1,430
„ „ dirty and cleansed before being used	348	214
„ „ „ not „ „ „ „	61	53
„ Inspections and reinspections of Vessels ...	5,559	4,823
„ found clean	3,296	3,069
„ „ dirty and cleansed before being used	2,196	1,738
„ „ going to Sea before being cleansed, without cattle or cargo	67	16
„ Inspections and reinspections of Gangways...	5,094	4,588
„ found clean	3,059	2,713
„ „ dirty and cleansed before being used...	2,035	1,875
„ Inspections and reinspections of Lairages and Sale Yards	8,296	5,676
„ found clean	5,513	4,296
„ „ dirty and cleansed before being used...	2,783	1,380

	<u>1911.</u>	<u>1912.</u>
Number of Carts used to convey Pigs, inspections and re-inspections	2,071	748
„ found clean	2,071	748
„ dirty and cleansed before being used.. ...	—	—
„ of visits to Manure yards and wharves ...	934	632

An information was laid for not cleansing and disinfecting a vessel after landing animals before other cargo was taken on board, and a fine of £5 and costs was inflicted.

<u>INSPECTION OF SLAUGHTER-HOUSES, &c.</u>	<u>1911.</u>	<u>1912.</u>
Number of Visits to Slaughter-houses made by Meat Inspectors	5,636	6,127
Number of Visits to Butchers' Shops made by Meat Inspectors	62,949	66,923
Number of Visits to Fish and Fruit Shops made by Fish Inspectors	52,415	51,307
Number of Visits to Fruit Shops made by Fruit Inspector	22,202	21,981

FOOD HAWKERS' PREMISES.

Number of Visits made by Inspectors	2,207	1,827
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FISH PLATFORMS.

Number of Visits made by District Sanitary Inspectors...	60	60
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POULTRY DEPOTS.

Number of Visits made by District Sanitary Inspectors...	635	450
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INSPECTION OF MEAT, FISH, FRUIT AND GENERAL FOOD STUFFS

The methods adopted have been explained in the Report for 1909.

RETURNS OF ANIMALS KILLED IN THE CITY SLAUGHTER-HOUSES,
AND OF MEAT IMPORTED FOR SALE.

The number of fat cattle from local dairies slaughtered in the City during 1912 was 2,837, as compared with 2,043 in 1911.

The small number of cattle slaughtered in the City is probably due to the importation of States cattle, and also to the importation of frozen meat, chiefly from the River Plate district.

There is a decrease in the number of sheep slaughtered, and an increase in the number imported, as compared with the year 1911.

With regard to pigs, it will be noticed that there is a slight decrease in the number killed in the City.

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale.			
						Beasts.	Sheep.	Calves.	Pigs.
Abattoir.	11106	139077	...	21079	30315	43984	411907	1082	...
Gill Street Market.	...	...	...	...	...	5166	37142	21	377
Allerton Road, Wavertree ...	242	2196	...	14	51	...	...	...	...
Back Castle Street	329	82	...	17	...	...	...	...	...
Brecon Street.....	43	208	6	1	...	...	...	...	...
Copperas Hill.....	...	...	...	...	13030	...	...	...	...
Corlett Street	6	2124	298	4	69	...	...	...	...
Carried forward	620	4610	304	36	13150	...	...	...	...

RETURNS OF ANIMALS KILLED IN THE CITY SLAUGHTER HOUSES

AND OF MEAT IMPORTED FOR SALE—Continued.

STREET.	Beasts.	Sheep.	Lambs.	Calves.	Pigs.	Dead Meat Imported for Sale.			
						Beasts.	Sheep.	Calves.	Pigs.
Brought forward	620	4610	304	36	13150	...	...	...	...
Derby Lane, Old Swan.....	...	351	85	...	4	...	...	...	...
Edgware Street	16	184	...	...	...	...	...	...	...
Foley Street .....	...	...	...	...	2139	...	...	...	...
Frederick Street.....	...	82	...	...	252	...	...	...	...
105, High Street, Wavertree.	26	11	...	1	7	...	...	...	..
Norman Street .....	...	...	...	...	699	...	...	...	..
Peel Street .....	...	313	45	...	...	...	...	...	..
Prescot Road, Knotty Ash ...	21	518	153	15	25	...	...	...	...
Sandown Lane, Wavertree ...	11	20	30	...	8	...	...	...	...
Sidwell Street, Garston	59	...	...	4	194	...	...	...	...
Soho Street.....	...	...	...	...	977	...	...	...	...
St. Mary's Road, Garston ...	4	...	...	1	...	...	...	...	...
Upper Milk Street.....	...	...	...	...	3956	...	...	...	...
West Derby Road, Tue Brook	227	945	212	4	830	...	...	...	...
Total in Private Slaughter-houses	984	7034	829	61	22241	...	...	...	...
Total in the City	12090	146111	829	21140	52556	49150	449049	1103	377

PRECEDING YEAR.

Total in Private Slaughter-houses	1282	10639	2039	71	19756	...	...	...	...
Total in the City	9626	233338	2039	19697	55179	49225	388350	1105	...

1911. 1912.

Number of Boxes of Offal imported, for sale 20,554 13,606

ABATTOIRS.

The position in regard to the slaughtering of animals throughout the City is practically the same as at the close of last year.

In the interests of public health, the Health Committee have during the last 10 or 15 years declined to renew or transfer licenses for private slaughter-houses, and a gradual decline in the number of the eminently unsuitable places has, therefore, taken place. The central abattoir and the associated offensive trades remain in the condition which has been so frequently commented upon. Every effort is made to palliate the nuisances inseparable from the conduct of businesses of this kind in situations which are cramped, confined, and unsuitable. The subject has been fully dealt with in previous reports.

SLAUGHTER-HOUSES WHICH HAVE CEASED TO BE USED.

PREMISES.	DATE.	REASON.	REMARKS.
180, Scotland Road (in "Wheat Sheaf" yard)	27th March, 1890	Licence refused. Situation unsuit- able; too near dwelling-houses.	
Byles Street	8th Nov., 1892	" "	
Benledi Street	June, 1894	" "	
Hodson Street	28th March, 1895	" "	
Lydia Ann Street ...	28th May, 1896	" "	
Embledon Street	12th Nov., 1896	" "	
1, Back Commutation Row	August, 1897	Lease expired. Licence surrendered.	
Gelling Street	24th Nov., 1897	" "	
Salisbury Road, Walton	May, 1898	Licence refused. Situation unsuit- able; too near dwelling-houses.	
Town Row, West Derby	28th July, 1900	(Registered) Premises vacated.	Now used as a Laundry.
West Derby Village ...	10th Oct., 1900	Licence surrendered.	
Norfolk Street	13th May, 1902	Licence refused. Situation unsuit- able; too near dwelling-houses.	
Bolton Street	12th June, 1903	Licence surrendered.	
Finch Place	5th July, 1902	" "	
Darnley Street	25th Feb., 1903	" "	
Crown Street	31st Jan., 1905	" "	
Cotter Street	1st April, 1905	(Registered) Premises sold to St. James' Church Mission.	Now used as Ironworker's store.
2, Back Commutation Row	30th June, 1906	Lease expired. Licence surrendered.	Now used as a Motor Garage
101, High Street, Wavertree	31st Dec., 1907	(Registered) Bought by Corporation.	Not used.
Byrom Street.....	12th Sept., 1908	Lease expired. Licence surrendered.	
Bevington Hill	30th April, 1909	Licence surrendered.	Premises sold to W. Moore, Wheelwright.
Back Mount Vernon Green	31st Jan., 1912	Licence surrendered.	Premises now used as a Marine Stores.
Allerton Road	1st July, 1912	" "	Premises now used for storing Agricultural Implements.
Brecon Street.....	26th Oct., 1912	" "	Premises demolished.

MEAT AND OFFAL FOUND TO BE UNFIT FOR HUMAN FOOD.UNWHOLESOME MEAT.

Cause of seizure or surrender.	Beef.	Mutton and Lamb.	Pork.	Veal.	Goats.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Tuberculosis	68,049	—	10,561	480	—	79,090
Abscesses	51	5	206	—	—	262
Actinomycosis ...	72	—	—	—	—	72
Anthrax	740	—	—	—	—	1,846
Damaged	4,326	1,949	557	123	—	6,955
Dropsy	6,513	568	106	881	41	8,003
Emaciation.....	9,911	5,427	501	2,719	399	18,957
Foot and Mouth disease	6,564	—	—	—	—	6,564
Immaturity	—	—	—	1,654	—	1,654
Inflammation ...	12,352	72	846	734	—	14,004
Jaundice	542	—	254	225	—	1,021
Pneumonia.....	—	—	—	220	—	220
Putrefaction	32,804	4,686	9,137	432	—	47,059
Necrosis	—	—	—	—	—	—
Suffocation	912	2,237	5,060	865	—	9,074
Swine Fever	—	—	300	—	—	300
Total	143,836	14,944	27,528	8,333	440	195,081

UNWHOLESOME OFFAL.

Cause of seizure or surrender.	Beef.	Mutton and Lamb.	Pork.	Veal.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.
Tuberculosis	5,852	—	83	—	5,935
Inflammation & Congestion	6,411	181	280	31	6,903
Putrefaction	50,412	3,141	11,647	57	65,257
Distomatosis	47,040	400	204	—	47,644
Hydatid	4,331	—	14	—	4,345
Anæmic	6,688	367	173	6	7,234
Emphysema	72	—	—	—	72
Cirrhosis	5,814	—	475	6	6,295
Necrosis	243	—	—	—	243
Abscesses	1,336	—	17	3	1,356
Cysts	9,164	10	30	28	9,232
Actinomycosis	215	—	—	—	215
Foot and Mouth disease ...	288	—	—	—	288
Total	137,866	4,099	12,923	131	155,019

Refuse consisting of Pigs' intestines, &c., 20,361 lbs.

CARCASES OF DISEASED OR INJURED ANIMALS SURRENDERED
OR SEIZED.

The following table shows the number of carcasses surrendered to, or seized by, the Medical Officer of Health and Inspectors:—

					<u>1911.</u>	<u>1912.</u>
Cattle	...	...	...	...	202	204
Calves	...	...	...	...	103	144
Sheep	...	...	...	...	376	341
Pigs	...	...	...	...	223	154
Goats	...	...	...	...	9	12
Totals					<u>913</u>	<u>855</u>

The following table shows the result of the examination of above carcasses of diseased or injured animals:—

				Beasts.	Calves.	Sheep.	Pigs.	Goats.	Total.
Anthrax	...	...	...	1	...	...	...	...	1
Damaged	...	...	...	2	...	34	...	...	36
Dropsy	...	...	...	14	8	14	4	1	41
Emaciation	...	..	...	21	58	187	15	11	292
Foot and Mouth disease	...			10	...	...	...	...	10
Immaturity	...	...	...	...	41	...	...	...	41
Inflammation	...	...		22	13	...	9	...	44
Jaundice	...	...	...	1	5	...	2	...	8
Pneumonia	...	...	...	...	2	...	...	...	2
Putrefaction	...	...	...	6	1	61	14	...	82
Suffocation	...	...	...	1	14	45	38	...	98
Swine fever	...	...	...	...	...	...	21	...	21
Tuberculosis	...	...	...	126	2	...	51	...	179
Total	...	...		204	144	341	154	12	855

Number of carcasses condemned by Justices under Section 117 of the Public Health Act, 1875	}	<u>1911.</u>	<u>1912.</u>
		1	3

The remainder were dealt with under a Local Act which does not require a Justices' Order.

The following table shows the district from which the Tuberculous cattle came:—

Where from.	Cattle.	Calves.	Pigs.	Total.
Ireland	29	—	8	47
Moreton	3	—	—	3
Hooton	1	—	—	1
Rock Ferry.....	1	—	—	1
Bootle	1	—	—	1
Ford	1	—	—	1
Chester	9	1	11	21
Waterloo	1	—	—	1
Preston	6	1	2	9
Manchester.....	9	—	—	9
Scotland	—	—	1	1
Wiltshire.....	2	—	—	2
Wrexham	2	—	1	3
Whiston	—	—	1	1
Greasby	2	—	—	2
Southport	—	—	5	5
Isle of Man	6	—	1	7
Knowsley	—	—	1	1
Beeston	—	—	2	2
Yorkshire	—	—	2	2
Huyton	2	—	—	2
Ellesmere	—	—	7	7
Local Cowsheds	41	—	9	50
Totals	126	2	51	179

The number of carcasses condemned in 1911 in consequence of the animal having suffered from Tuberculosis was as follows:—

Cattle	...	...	...	...	...	110
Calves	...	...	...	...	...	2
Pigs	...	...	...	...	...	20
Total						132

ANIMALS SMOTHERED OR INJURED IN TRANSIT ON BOARD SHIP.

Beasts	Sheep.	Pigs.	Number passed.	Number rejected.	Weight of rejected meat. lbs.
7	228	26	239	22	2,650

FISH, POULTRY, &c., FOUND TO BE UNFIT FOR HUMAN FOOD.

FISH.

Wet Fish.	Dried Fish.	Crabs.	Lobsters.	Prawns.	Total.
lbs. 123,199	lbs. 20,824	lbs. 580	lbs. 1,539	lbs. 2,060	lbs. 148,202

POULTRY.

Fowls	Ducks	Geese	Turkeys	Total.
1,185	186	104	14	1,489

GAME.

Ptarmigan	Pheasants	Black Cock	Partridges	Grouse	Total.
28	41	58	3	174	304

RABBITS AND HARES.

Rabbits.	Hares.	Total.
13,562	126	13,688

SHELL-FISH.

Cockles. bags.	Mussels. bags.	Winkles. bags.	Total. bags.
44	92	15	151

VARIOUS.

Cream Cheese.	Wild-birds.	Clams.	Oysters.	Venison.	Apricot pulp.	Condensed Milk.	Yeast.
lbs. 29	353	lbs. 120	16,300	lbs. 144	lbs. 4,720	lbs. 247	lbs. 60

FRUIT, VEGETABLES, &c., FOUND TO BE UNFIT FOR
HUMAN FOOD.

FRESH FRUIT.

	lbs.
Apples	4,645
Bananas	108,541
Blackberries	16
Cherries	138
Grapes	190
Grape Fruit	300
Lemons	720
Melons	3,060
Oranges	4,456
Peaches	218
Pears	10,930
Plums	9,935
Strawberries	6
Tomatoes	14,035
Total....	157,190

DRIED FRUIT.

	lbs.
Chestnut	2,300
Dried Figs	2,114
Dates	260
Total	4,674

VEGETABLES.

	lbs.
Beans	160
Broccoli	1,100
Carrots	34,216
Cucumbers	300
Gherkins	5,000
Leeks	60
Lettuce	798
Onions	40,270
Parsley	224
Potatoes	16,279
Spinach	1,234
Sprouts	1,490
Turnips	672
Water-cress	245
Total	102,048

TINNED FRUIT.

Apples	661 8lb. tins.
Pineapples	3 tins.
Tomatoes	569 tins.

MEAT, FISH AND FRUIT, &c., FOUND TO BE UNFIT FOR HUMAN FOOD

The following table summarises the amount of unsound food which was either seized or surrendered during the year, and which was destroyed:—

	MEAT.				OFFAL.				TOTAL.			
	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.
Beef	64	4	1	0	61	10	3	22	125	15	0	22
Veal	3	14	1	17	—	1	0	19	3	15	2	8
Mutton and Lamb ...	6	13	1	20	1	16	2	11	8	10	0	3
Pork	12	5	3	4	5	15	1	15	18	1	0	19
Venison	—	1	1	0	—				—	1	1	0
Goats	—	3	3	20	—				—	3	3	20
Total	87	3	0	5	69	4	0	11	156	7	0	16

	Tons.	cwts.	qrs.	lbs.
Fish	66	3	0	26
Fresh Fruit	70	3	1	26
Dried Fruit	2	1	2	26
Apricot Pulp	2	2	0	16
Vegetables	45	11	0	16
Tinned Fruit			1,233	tins
Condensed Milk			247	lbs.
Poultry			1,489	head
Game			304	„
Wild Birds			353	„
Rabbits and Hares			13,688	„
Mussels, Winkles, and Cockles			151	bags
Clams			120	lbs
Oysters			16,300	
Cream Cheese			23	lbs.
Yeast			60	„

This does not include fish removed as refuse by Officers of the Cleansing and Scavenging Department under the City Engineer.

The great bulk of this material was not exposed for sale, and did not require a Justices' order for its destruction.

The quantity of fish condemned includes both fresh fish and salt fish which had become tainted during transit or storage.

							<u>1911.</u>	<u>1912.</u>
Number	of	informations	in	respect	of	diseased	meat ...	1 4
„	„	„	„	„	„	unsound	fruit ...	— 2
							<hr/>	<hr/>
						Total	number of informations ...	1 6
Number	Fined	... ..	...	...	...	...	1	4
„	Withdrawn or Dismissed	...	...	...	...	...	—	2
							<hr/>	<hr/>
Amount	of	Fines	and	Costs	... ..	£20 19 6	£17 4 6	

RETURN OF THE NUMBERS OF CATTLE, SHEEP AND SWINE
EXPORTED FROM IRELAND TO LIVERPOOL DURING
THE YEAR 1912, SHOWING THE PORTS IN IRELAND AT
WHICH THE ANIMALS WERE SHIPPED.

	Cattle.	Sheep.	Swine.
Ballina	157	12,204	3,961
Belfast	15,566	35,932	1,033
Cork	22,342	40,855	8,393
Drogheda	16,466	25,373	2,613
Dublin	90,542	137,164	44,942
Dundalk	11,469	24,400	14,332
Londonderry	11 319	10,398	646
Newry	5,242	25,091	6,445
Sligo	307	14,286	9,924
Waterford	43,779	95,126	15,316
Westport	1,517	28,069	4,180
Wexford	2,306	21,475	1,931
Total	221,012	470,373	113,718

RETURN SHOWING THE TOTAL NUMBERS OF THE SEVERAL
KINDS OF CATTLE, SHEEP AND SWINE EXPORTED FROM
IRELAND TO LIVERPOOL, DURING THE YEAR 1912.

CATTLE.	No.	SHEEP.	No.
Fat	185,873	Fat	245,881
Stores (for fattening)	23,020	Stores	190
Milch Cows	8,758	Lambs	224,302
Springers	1,138		
Other Cattle	811	Total Sheep	470,373
Calves	1,412		
Total Cattle	<u>221,012</u>	SWINE.	
		Fat	111,519
		Stores	2,199
		Total Swine	<u>113,718</u>

THE GLANDERS AND FARCY ORDER OF 1907.

The Health Committee have made regulations under the Diseases of Animals Act and the Glanders and Farcy Order of 1907 which have been circulated amongst the horse-owners in the city. Accompanying these regulations were notices indicating the means of combating the disease and the necessary precautions to be taken.

The following table indicates the number of affected animals during the last six years. It will be noted that in 1912 the city was again entirely free from the disease.

Year.					No. of Cases.
1907	...	...	...	...	1
1908	...	...	...	...	—
1909	...	...	..	...	1
1910	...	...	...	...	—
1911	...	...	...	...	—
1912	...	...	...	...	—

Immediate notification of actual or suspected cases of Glanders is received either from the owner, police, or the veterinary surgeon who may be called in to the case, or from the horse slaughterer's yard (there is only one in the city).

In further reference to glanders and farcy, it may be mentioned that the Veterinary Superintendent has caused the lungs of all horses and asses sent to the knacker's yard to be submitted to examination, and it is by these inspections that unreported cases can be discovered.

This precaution is also taken to ensure owners being immediately notified of the existence of the disease, which may be in a latent state, and to protect the public from unscrupulous persons who may not conform to the requirements of the act.

Year	Lungs Examined.	Affected.	Not Affected.
1911	1,970	—	1,970
1912	1,946	—	1,946

INSPECTION OF HORSE AUCTIONS.

The sale yards in the City have been regularly visited and the animals exposed for sale there examined for the presence of any contagious disease within the meaning of the Diseases of Animals Acts. With the exception of several cases of parasitic mange, they were found to be free from infectious disease.

EXAMINATION OF CATTLE AND SHEEP.

At the Liverpool Cattle Market during 1912, the following animals were inspected by the Veterinary Department. The figures for 1911 are also given for comparison.

	<u>1911.</u>		<u>1912</u>		<u>Decrease.</u>
Cattle	51,211	...	31,304	...	19,907
Sheep	333,920	...	173,635	...	160,285
Other animals	15	...	—	...	—

The marked diminution in animals exposed for sale was due to the closure of the market owing to an outbreak of foot-and-mouth disease which is dealt with under another heading.

THE PARASITIC MANGE ORDER OF 1911.

Under this Order immediate notification of actual or suspected cases of mange in horses is received from the owner, police, horse slaughterers, or veterinary surgeons who may be called in to the case. The suspected animals were then examined by the Veterinary Department, and also the entire stud when at rest. Affected animals are immediately isolated and kept under observation until the disease has disappeared. Thorough disinfection of the premises, harness, utensils, feeding troughs, &c., is carried out under the supervision of the veterinary inspectors.

A fee of 2s. 6d. is paid to veterinary surgeons for notifying the existence of this disease. £15 5s. 0d. was expended in this way. Prosecutions were instituted in 16 cases, 15 of which were convicted and 1 was dismissed. The lowest fine was 5s. 6d. and the highest £7 4s. 6d., the total amount of fines being £43 6s. 0d.

The total number of outbreaks or premises where the disease was found to exist was 341 and the number of visits paid to these premises was 2,046.

THE EXPORTATION OF HORSES ORDER OF 1910.

Under this order of the Board of Agriculture and Fisheries, no horse, ass, or mule can be shipped from any port in Great Britain to the Continent of Europe unless accompanied either by a veterinary or Jockey Club certificate, or a special permit issued by the Board of Agriculture.

All horses intended for shipment from Liverpool are inspected before going on board by officers of the Veterinary Department and if, in their opinion, any horse, ass or mule, which, through old age, infirmity or sickness might undergo unnecessary suffering in transit, they have power under the order to stop shipment.

During the year 1912, 18 horses were shipped to the Continent; they were all valuable animals and in first-class condition.

This order was instituted to control the trade of old worn-out horses between this country and the Continent.

THE FOOT-AND-MOUTH DISEASE ORDER OF 1895.

Foot-and-Mouth disease unfortunately appeared in June. The limbs and tongues of four animals were first reported to the Veterinary Department from the Abattoir, Trowbridge Street, by the Chief Meat Inspector. These were from cattle imported from Ireland. The second outbreak was in Allerton, where two recently imported Irish animals were found to be affected. A third outbreak occurred at Knotty Ash amongst Liverpool cattle which had been grazing with recently imported Irish beasts.

The Board of Agriculture issued Local Orders; the landing of cattle from Ireland and the holding of any market or movement of cattle within the City were prohibited. These restrictions were afterwards greatly relaxed, Irish cattle were allowed to land at the foreign animals' wharves for slaughter, such as Birkenhead. After awhile the restrictions were further lessened and the animals were landed and quarantined for three days in the wharf and 21 days in the homestead. Market restrictions were soon removed but the Board of Agriculture have thought wise to order a permanent quarantine of 12 hours of all cattle landed from Ireland. The above regulations have been the means of bringing about the decrease shown under the Examination of Cattle and Sheep.

THE ANTHRAX ORDER OF 1910.

Several reported cases of anthrax were investigated by the Health Department under this Order. Some were found not to be suspicious of anthrax on microscopical examination, but 13 cases were thought after diagnosis by the Veterinary Department to be anthrax, 12 of which were confirmed by the Board of Agriculture.

In connection with the spread of anthrax to farm animals owing to the contamination of cattle food products with the spores of the bacillus during shipment in foreign parts and during the voyage, the staff of the city and port have kept this matter constantly before them, and systematic enquiries have been made as to the possibility of the contamination of cattle food products. In addition, the Board of Agriculture have issued a notice to shipowners and others concerned, pointing out that special precautions should be adopted when cargo containing animal products likely to be infected (such as hides, hair, wool, &c.,) is carried in the holds and other parts of vessels before such places are used for carrying any cargo likely to be utilised as cattle food.

THE RABIES ORDER OF 1897.

Three suspected cases of rabies were dealt with under this Order. These were examined by the Corporation Bacteriologist and certified to be free from rabies.

THE IMPORTATION OF CANINE ANIMALS ORDER OF 1909.

This Order was issued by the Board of Agriculture in 1909 to control the importation of animals such as wolves and jackals, and so prevent the introduction of rabies by animals other than dogs whose importation was already controlled by the Importation of Dogs Order of 1901. Three post mortem examinations were made in menageries on jackals which had died whilst in quarantine. They were all free from rabies.

THE PROTECTION OF ANIMALS ACTS, 1911.

Under this act the police have power to call in a veterinary surgeon in cases of cruelty and act upon his advice. The Veterinary Department have been consulted on several occasions in this respect.

SWINE FEVER ORDER.

With a view to facilitate the trade in the import of pigs from Ireland, and in order to fulfil the obligations of the Board of Agriculture, certain premises have been scheduled by the Health Committee to which pigs may be licensed, viz. :—

Stanley Cattle Market; pens at South end of the East side of the Nelson Dock; pens at East side of the Collingwood Dock; pens at South-west side of the Collingwood Dock; pens at South end of Prince's Pierhead.

The exigencies of the import trade appear to be met by this arrangement, the pigs being re-licensed after sorting at the places named. Objection to the arrangement was raised on the grounds that these premises were used for market purposes. An investigation was made into the matter, but it was found desirable, on the whole, that the arrangement should continue.

Owing to an outbreak of Foot and Mouth Disease among Irish Cattle, which was first discovered at the Liverpool Abattoir in July, 1912, all pigs since that date coming from Ireland to Liverpool must first be landed at the Foreign Animals Wharf at Birkenhead and detained 12 hours for Veterinary Inspection by Board of Agriculture officials, after which they receive a movement license under the Order.

PIGGERIES.

There were 10 applications made during the year for licenses to keep pigs, of which 6 were transfers. Of the remaining 4, all of which were new applications involving 238 pigs, 2 were granted and 2 refused. Four hundred and thirty-one visits were paid to piggeries during the year.

DAIRIES, COWSHEDS AND MILKSHOPS

There is no change in the method of procedure respecting the licensing of cowsheds and the registration of dairies, milkshops and milkstores.

STATISTICS RESPECTING COWSHEDS.

							<u>1912</u>
Number of applications to keep cows on premises not							
	previously licensed	...	...	...	...	...	3
„ „ granted	...	...	...	...	...	...	3
„ cows applied for	...	...	...	...	...	...	57
„ „ granted	...	...	...	...	...	...	57
„ applications for transfer to fresh tenants of cowsheds							
	previously licensed	...	...	...	...	...	30
„ „ granted	...	...	...	...	...	...	29
„ „ in abeyance	...	...	...	...	...	...	1
„ „ to keep more cows than the number for							
	which the license was originally						
	granted	...	...	...	...	...	4
„ „ granted	...	..	...	...	...	...	4
„ additional cows applied for	.	..	..	...	...	...	12
„ „ granted	...	...	...	...	...	...	12
„ Cowsheds on the register 31st December, 1911						...	436
„ „ „ „ „ „ 1912						...	432
Number of cows licensed to be kept within the city area	...	...	...	...	...	...	6,589

COWSHED INSPECTION.

				<u>1911</u>	<u>1912.</u>
Number of Inspections of Cowsheds	...	...	...	4,218	4,322
,, found Incorrect	...	...	...	75	78
,, of Informations	...	...	...	2	2
,, ,, ,, Withdrawn	...	...	...	1	—
				<hr/>	
Amount of Fines and Costs	...	...	...	£0 18 0	| £2 9 0
				<hr/>	

Fifty-one notices have been issued to occupiers directing their attention to contraventions of the regulations.

Number of cowsheds in the city during the years 1903 to 1912 inclusive, together with the number of cows licensed to be kept, and the number of applications for new cowsheds:—

Years.		Cowsheds.		Cows.		Applications.	
1903	...	447	...	6,214	...	12	Incorporation of Garston
1904	...	449	...	6,359	...	7	
1905	...	456	...	6,426	...	17	Incorporation of Fazakerley
1906	...	466	...	6,666	...	7	
1907	...	462	...	6,734	...	11	
1908	...	466	...	6,768	...	3	
1909	...	466	...	6,778	..	2	
1910	...	447	...	6,691	...	4	
1911	...	436	...	6,428	...	0	
1912	...	432	...	6,589	...	3	

MILKSHOPS.

							<u>1912.</u>
Number of Applications for registration	...	...	...	...	...	...	*110
„ „ granted	...	...	...	...	...	...	106
„ „ withdrawn	...	..	..	...	...	...	3
„ „ refused	...	...	...	...	...	...	0
„ „ in abeyance	...	...	...	...	...	...	1
Number of Milkshops on the register at the end of 1908	...	...	...	...	...	...	814
„ „ „ „ 1909	...	...	...	...	...	...	834
„ „ „ „ 1910	...	...	...	...	...	...	821
„ „ „ „ 1911	...	...	...	...	...	...	847
„ „ „ „ 1912	...	...	...	...	...	...	838

* Ninety-one of these applications were transfers.

DAIRIES AND MILKSHOPS INSPECTION.

						<u>1911.</u>	<u>1912.</u>
Number of Inspections of Dairies and Milkshops						6,988	7,221
„ found incorrect	...	...	...	...		51	40
„ of Informations	...	..	...	...		0	0
„ Fined	...	...	...	...		0	0
„ Withdrawn	...	...	...	...		0	0
Amount of Fines and Costs	...	...				£0 0 0 | £0 0 0	

Fifty-six caution notices have been issued to occupiers of milkshops, and sixteen notices were sent to farmers for contraventions of the Regulations.

LEAVELOOKERS' VISITS TO COWSHEDS FOR THE PURPOSE OF
EXAMINING COWS.

No. of Visits.	No. of Examinations of Cows.	No. found Healthy.	No. found ill.	No. referred to the Veterinary Superintendent.
1,802	22,652	22,526	126	126

ICE CREAM MAKERS AND VENDORS.

The usual inspections have been made of the premises utilised by the street traders solely for manufacturing ice cream.

The dwellings which these street traders occupy have also been kept under observation, and in no instance during the past year has it been found that ice cream has been made or stored in or about these dwellings.

A systematic inspection has also been made of shopkeepers' premises which are used for the manufacture and sale of ice cream.

					<u>1911.</u>	<u>1912.</u>
Number of premises under Inspection	...	...			992	1,032
,, visits made	...	...	.	...	2,846	2,946
,, caution notices issued	...	..	...		34	26
, Informations	...	...	...	...	—	—

TUBERCULOSIS AND THE MILK SUPPLY.

LIVERPOOL CORPORATION ACT, 1900.

The examination of cows and cowsheds within the city has been duly carried out throughout the year, and all cases of sickness found by the Leave lookers reported to the Veterinary Department. In cases where the cows are reported to be suffering from any disease of the udder, or any other disease likely to be inimical to the public health, the Medical Officer of Health directs that the animal be submitted to Veterinary examination and reported upon. Should clinical symptoms of tuberculosis of the udder be in evidence, the cow is either removed from the cowshed for slaughter or kept strictly isolated pending a definite conclusion of the case.

The following is a table showing the number of visits made by the Veterinary Inspectors to cowsheds within the city boundary.

YEAR.	No. of Visits to Town Cowsheds.	No. of Cases notified by Owners.	No notice given.	No. of Cows examined.	No. of Cows not affected.	No. of Cows Suspicious of Tuberculosis of the Udder.	No. of Convictions for Offences under the Act.
1901	40	—	—	59	32	27	—
1902	12	—	—	13	7	6	1
1903	61	27	34	121	97	24	7
1904	305	168	137	665	595	70	12
1905	239	176	63	298	241	57	1
1906	198	172	26	225	211	14	—
1907	188	137	51	238	235	3	—
1908	171	121	50	255	252	3	—
1909	177	114	63	203	200	3	—
1910	144	103	41	189	188	1	—
1911	128	85	43	215	213	2	—
1912	207	78	129	1755	1738	17*	—
Totals	1870	1181	637	4236	4009	227	21

* There were 17 cases of tuberculosis of the udder, all of which were confirmed either by bacteriological or post-mortem examination.

It has been necessary during the routine examination of cattle to take 95 samples of milk for bacteriological examination. Thirty of these were control samples, and all proved to be non-tubercular. The remaining 65 were direct samples from abnormal udders, 55 of which were non-tubercular and 10 tubercular. These samples are included in the figures in the table of samples submitted for bacteriological examination within the city.

MILK SUPPLIED FROM OUTSIDE THE CITY BOUNDARIES.

Under the Liverpool Corporation Act, 1900, Inspectors systematically visit various places supplied with milk from the country, including the railway stations and hospitals, and there take samples. These samples are then submitted to bacteriological examination. Should they be found to contain tubercle bacilli (the germs of consumption), the Veterinary Superintendent or his Assistant, accompanied by the Medical Officer of Health or his representative, and furnished with an Order signed by a magistrate resident within the county from which the milk is consigned (as prescribed by the Act), visits the farm or dairy and examines the stock therein. The cowsheds from which the affected supplies have been derived during the last twelve years are situated in the counties included in the following tables:—

NUMBER OF FARMS FROM WHICH MILK WAS FOUND TO
BE AFFECTED WITH TUBERCLE.

Year.	CHESHIRE.	SHROP- SHIRE.	DENBIGH- SHIRE.	LANCA- SHIRE.	FLINT- SHIRE.	STAFFORD- SHIRE.	DERBY- SHIRE.
	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.	Affected Farms.
1901...	10	1	1	—	—	—	—
1902...	11	2	2	—	1	1	—
1903...	7	3	1	1	—	—	—
1904...	7	6	1	—	1	1	1
1905...	7	—	1	1	—	—	—
1906...	7	2	2	2	1	—	—
1907...	6	1	2	—	—	1	—
1908...	2	1	1	1	—	—	—
1909...	4	2	—	—	—	—	—
1910...	4	4	—	—	1	—	—
1911...	6	—	1	—	—	—	—
1912...	6	—	—	1	—	—	—
Totals	77	22	12	6	4	3	1

TABLE SHOWING THE VARIOUS COUNTIES FROM WHICH MILK HAS BEEN SENT INTO THE CITY FROM JANUARY, 1901, TO DECEMBER, 1912, TOGETHER WITH OTHER STATISTICAL DETAILS OF WORK DONE UNDER THE LIVERPOOL CORPORATION ACT, 1900.

A—Samples direct from Cows at affected Farms.
B—Samples of mixed Milk taken at various places within the City.
C—Combined Totals.

Year.	CHESHIRE.						SHROPSHIRE.						DENBIGHSHIRE.						LANCASHIRE.						FLINTSHIRE.						STAFFORDSHIRE.						YORKSHIRE.						OTHER COUNTIES.						
	Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			Total Number of Samples Examined.			Found to be Tubercular.			
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C				
1901.....	10	206	216	2	13	15	3	42	45	—	2	2	2	6	8	—	2	2	—	29	29	—	—	—	—	10	10	—	1	1	—	2	2	—	—	—	—	—	—	—	2	2	—	—	—	—	—		
1902.....	18	247	265	2	13	15	4	52	56	—	5	5	6	14	20	3	5	8	—	27	27	—	—	—	1	6	7	1	—	1	1	4	5	—	3	3	—	2	2	—	—	—	—	—	—	—	—	—	
1903.....	4	194	198	1	10	11	3	60	63	—	6	6	—	23	23	—	1	1	1	44	45	—	1	1	—	11	11	—	—	—	—	10	10	—	—	—	—	—	—	—	—	1	1	—	—	—	—		
1904.....	5	203	208	1	12	13	6	58	64	1	9	10	3	27	30	2	8	10	—	27	27	—	—	—	—	25	25	—	1	1	—	2	2	—	2	2	—	2	2	—	2	10	12	—	1	1	—	1	1
1905.....	10	205	215	1	8	9	—	44	44	—	—	—	—	44	44	—	3	3	—	31	31	—	2	2	—	6	6	—	—	—	—	3	3	—	—	—	—	3	3	—	—	—	—	2	2	—	—	—	
1906.....	4	165	169	1	12	13	3	47	50	—	4	4	3	28	31	—	1	1	2	34	36	—	2	2	2	16	18	—	1	1	—	1	1	—	1	1	—	6	6	—	—	—	—	10	10	—	—	—	
1907.....	4	142	146	1	7	8	—	39	39	—	—	—	—	20	20	1	4	5	—	21	21	—	—	—	—	16	16	—	1	1	—	4	4	—	—	—	—	2	2	—	—	—	—	9	9	—	—	—	
1908.....	3	203	206	1	4	5	1	48	49	—	4	4	1	5	6	—	—	—	—	2	2	—	1	1	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	—	—	—	—		
1909.....	5	213	218	1	5	6	3	48	51	3	1	4	—	37	37	—	—	—	—	15	15	—	—	—	—	10	10	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—	7	7	—	—	—	
1910.....	3	190	193	2	6	8	1	69	70	—	6	6	—	19	19	—	—	—	—	22	22	—	—	—	1	12	13	—	1	1	—	4	4	—	—	—	—	—	—	—	—	—	2	2	—	—	—		
1911.....	7	247	254	2	14	16	—	26	26	—	—	—	1	24	25	1	1	2	2	16	18	—	—	—	—	20	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—		
1912.....	70	217	287	6	19	25	—	79	79	—	—	—	—	6	6	—	—	—	3	17	20	—	1	1	—	17	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	—	—	—	—		
Totals ...	143	2432	2575	21	123	144	24	612	636	4	37	41	16	253	269	7	25	32	8	285	293	—	7	7	4	152	156	1	5	6	1	30	31	—	6	6	—	18	18	—	—	—	2	58	60	—	1	1	

The cows housed in the City cowsheds yield approximately 17,000 gallons per day; the daily consumption of milk amounts to more than 35,000 gallons, or over seven ounces per head per day of the population.

The quantity of milk sent into the City from the different counties included in the foregoing table also amounts to between 17,000 and 18,000 gallons per day: of this quantity upwards of 60 per cent. comes from Cheshire. It may be mentioned that over 100,000 cows are in milk within the county of Cheshire, which is the largest dairy district in the United Kingdom.

The country cowsheds generally are found to be much inferior (from a sanitary point of view) to those within the City of Liverpool, and although, owing to the passing of the Liverpool Act, a large number have been greatly improved, there are many which are in a most unsatisfactory condition. In a number of cases farmers have expressed their approval of the beneficial results of the inspections made by the Liverpool Authorities owing to the consequent improvements made in the premises by the landlords.

Many of the cattle also are neither so good, nor are they kept in the same cleanly condition, as those of the city.

When tuberculosis of the udder is suspected the necessary proceedings are taken as prescribed by the Act. They are similar in principle to those adopted within the city. Samples of milk are also taken from suspected animals, and submitted to a further bacteriological test to verify the diagnosis of the case. In the meantime the animals are isolated, and the milk dealt with as in the city.

It is not possible in all cases to find evidence of disease of the udder in the herd, the explanation usually being that the infected animals have been sold during the time which elapses between the taking of the sample in Liverpool and the visit of the Corporation officials to the farm.

Affected animals are usually disposed of for slaughter, but, it has been found that they are occasionally sold as milking cows, and, as a natural consequence, upon going into other herds would be likely to further disseminate the disease.

The following table gives statistical details concerning visits to farms outside the city boundary :—

YEAR.	No. of Farms Visited.	No. of Re-Visits to Farms.	Total No. of Visits to Farms.	No. of Cowsheds Examined.	No. of Cows Examined.	No. of Cows Suspicious of Tuberculosis of the Udder.	No. of Convictions for Offences under the Act.	No. of Orders Prohibiting the Sale of Contaminated Milk within the City.
1901	12	6	18	40	351	20	1	4
1902	17	5	22	66	760	18	3	3
1903	13	2	15	32	364	10	3	2
1904	17	1	18	39	604	19	1	5
1905	9	1	10	20	266	9	4	1
1906	14	—	14	25	391	10	6	1
1907	12	1	13	31	462	7	1	1
1908	11	1	12	31	568	5	3	1
1909	12	8	20	76	1153	6	—	—
1910	13	5	18	60	871	4	1	2
1911	10	13	23	71	1365	3	2	1
1912	12	7	19	54	1121	4	2	2
Totals ...	152	50	202	545	8276	115	27	23

Local Authorities in Rural Districts are often negligent in regard to the supervision of cowsheds. In every district, Bye-laws should be made and enforced in accordance with the Parliamentary powers given with this object.

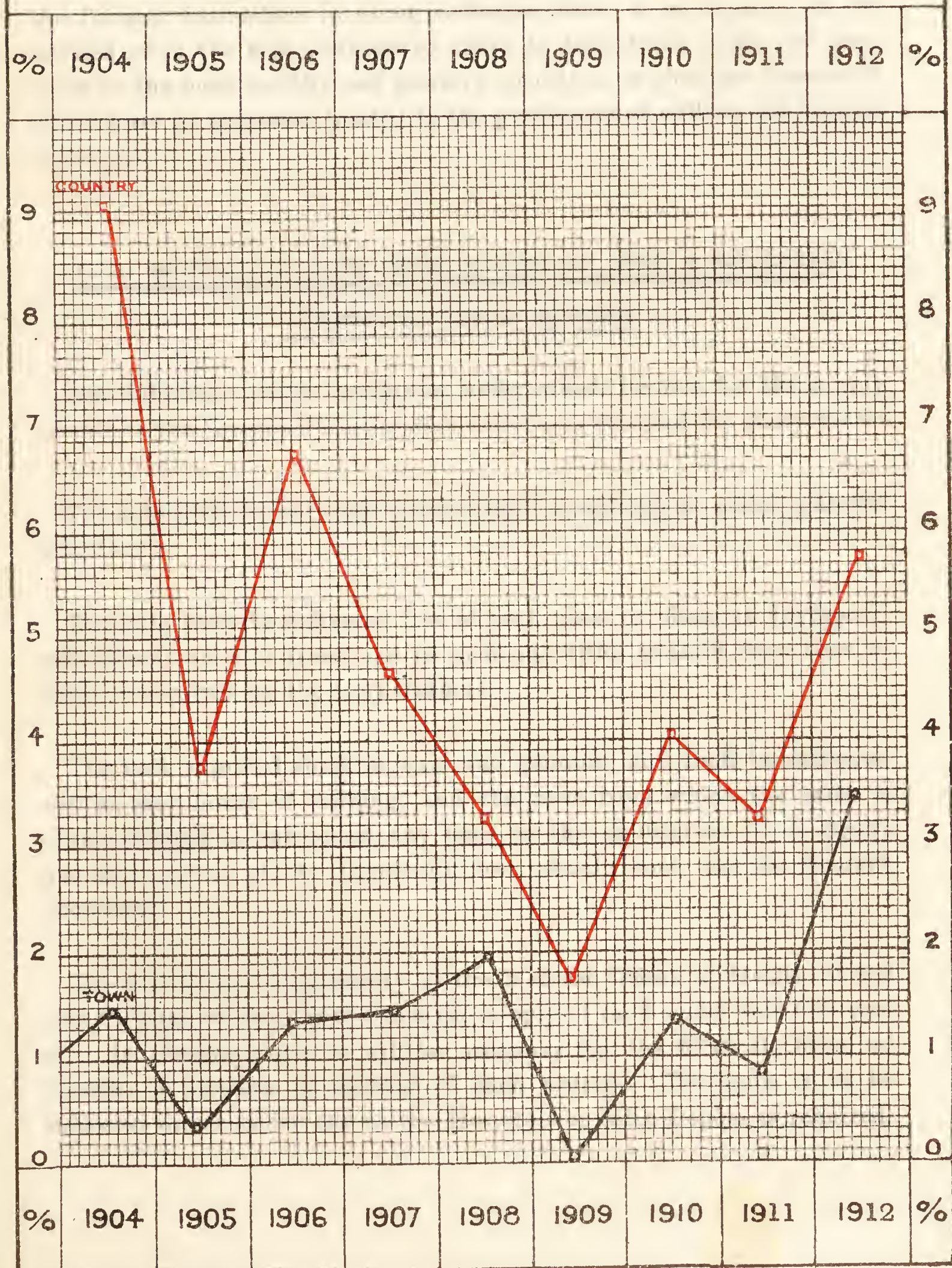
CITY OF LIVERPOOL.

Percentage of Samples of

TOWN (BLACK) & COUNTRY (RED) MILK

found to be TUBERCULAR

during each of the last NINE YEARS



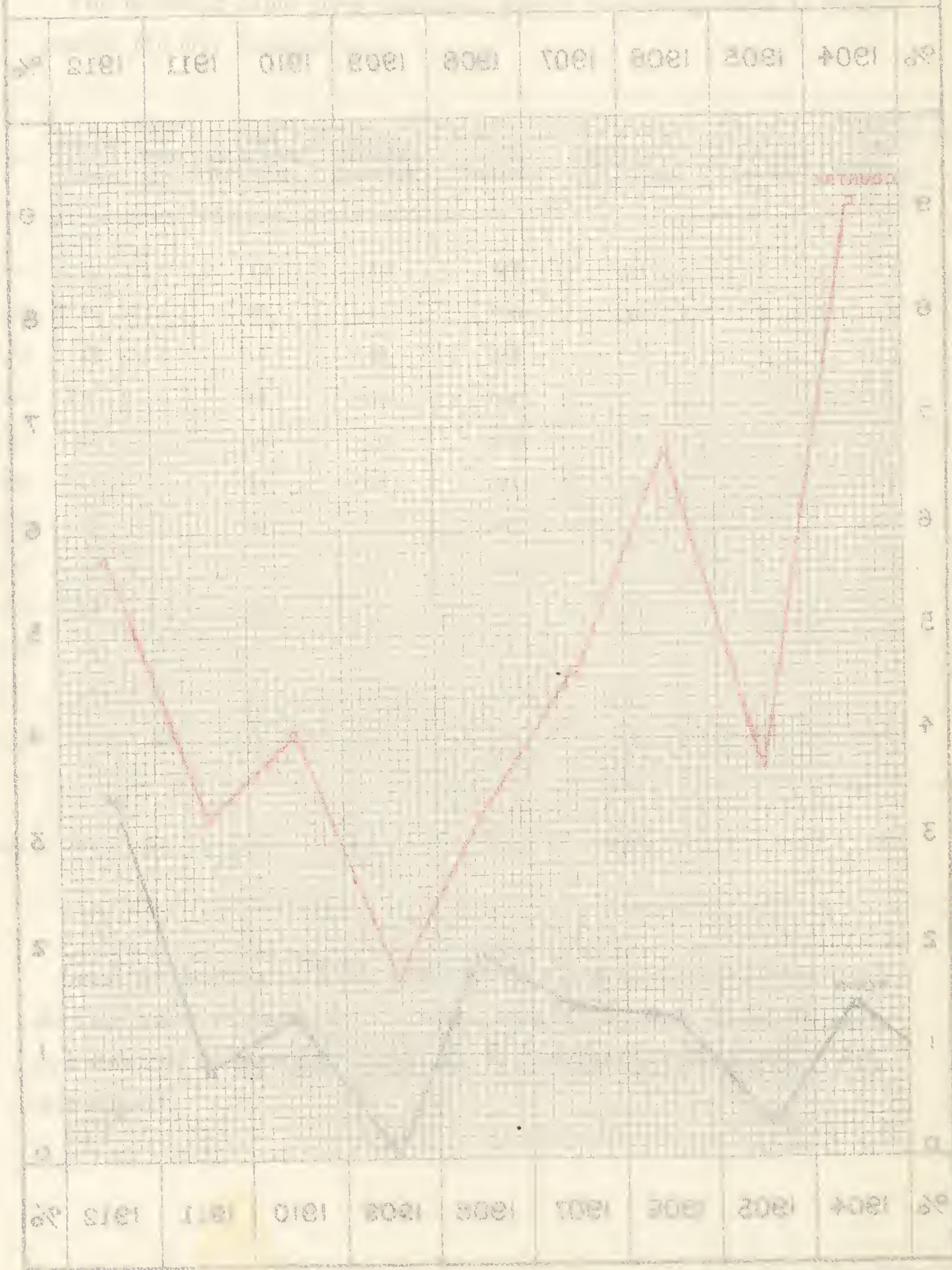
CITY OF LIVERPOOL.

Percentage of Samples of

TOWN (BLACK) & COUNTRY (RED) MILK

Found to be TUBERCULAR

during each of the last NINE YEARS



Although the application of the Act involves a considerable amount of expense to the Liverpool Corporation and takes up a good deal of the time of its officials, the result is that the city is protected to a great extent from the evils which follow an impure milk supply. The Local Authorities of many surrounding districts have also become alive to the necessity of insisting upon better sanitation of farms and cowsheds, and the farmers themselves in many instances show a willingness to be advised as to the best methods to adopt to keep their cattle and cowsheds in the most healthy and sanitary condition, so that the benefits of the Act are by no means limited to the purchasers of milk in the City of Liverpool.

MILK SUPPLY TO THE CITY HOSPITALS AND CORPORATION
STERILISED MILK DEPOTS.

The following are the conditions under which tenders for the supply of milk to the Liverpool Corporation have been received for many years:

The milk must be pure and genuine milk containing no added material whatever.

The milk must be delivered free at such place or places in Liverpool, and at such time or times and in such quantities as shall from time to time be required by the Corporation.

The milk supplied shall be pure and genuine, and shall be delivered within four hours of milking, and the cows from which the same is obtained shall be subject at any time to the application by a legally qualified person of the tuberculin test, should such test be thought necessary.

The Contractor shall specify to the Medical Officer of Health of the said City the sources from which the supply of milk under this Contract is to be obtained, and it will be necessary for the Medical Officer of Health to approve in writing of such sources. The milk is to be delivered direct under seal to the Hospitals or Milk Depôts as required.

The Contractor shall, once in every six weeks, cause an examination to be made by a Veterinary Surgeon of the cows supplying the milk, and the Certificate of such Veterinary Surgeon relating to the cows shall be forwarded to the Medical Officer of Health for submission to the Committee.

The Contractor shall, once in every six weeks, or oftener if thought necessary, visit the farms from which the milk is obtained for the purpose of ascertaining that the shippens, &c., are in a satisfactory condition, and shall furnish to the Medical Officer of Health a Report of each such visit.

The Contractor shall arrange that the farms, premises and cattle from which the milk under this Contract is supplied shall be open at any time to the inspection of the Medical Officer of Health and Veterinary Superintendent of the said City, or their authorised representatives.

The Contractor shall furnish at the time of delivery of any of the milk an advice or delivery note quoting the official order number, and setting forth the price thereof. No milk will be received unless such delivery or advice note is furnished, and the Corporation will not be responsible for any milk delivered, except in accordance with the official order.

The Contractor shall, if so required, also supply other Departments of the Corporation, on the official order of the Head of the Department, with any of the articles enumerated at the prices affixed thereto, and on the above conditions.

The person whose Tender is accepted will be required to execute a Contract to be prepared by the Town Clerk, which will include a provision that the due performance of the conditions is the essence of the Contract.

The Contractor will also provide two approved Sureties for the due performance of his Contract.

MILK DEPÔTS.

The high rate of infant mortality, attributable to improper feeding, justifies the continuation of the Depôts at which a preparation of pure cows' milk is made to resemble human milk as closely as possible. This preparation is intended for the use of infants, whose mothers are unable to suckle them.

Since the initiation of the scheme, in 1901, 22,908 infants have been fed upon humanised milk supplied from these Depôts. The average age at the commencement of such feeding is $3\frac{3}{4}$ months; very few (2,257) were, from one cause or another, admitted after twelve months of age.

The expenditure and income of the Depôts during the last five years is shown on the appended table, and the whole subject has been fully dealt with in the Report of 1909. The problem of finding a complete substitute for the milk of a healthy mother has not been solved, and, probably, never will be. As the infant grows, there are, no doubt, variations in the quality of the mother's milk, which specially adapt it to the needs of that particular infant, niceties in nature which cannot be approached artificially; but when artificial feeding becomes necessary, it is obviously important that the best possible substitute for mother's milk should be available.

It is the polluted cows' milk and the unsuitable artificial foods which cause the mischief, and as it is impossible by Municipal administration to reach and deal with all the sources of pollution, the justification for the present undertaking arises. The Municipality has spared no efforts to ensure a pure milk-supply.

The infants fed on humanised sterilized milk during the year were 2,943, and since the commencement of the scheme the numbers which have been supplied are as follows:—

Netherfield Road	Depôt	.....	4080
Earle Road	Do.	.....	3327
Park Road	Do.	.....	3407
Cazneau Street	Do.	.....	3231
Boaler Street	Do.	.....	997
Hornby Street	Do.	.....	361
			15,403
Total supplied from Depôts			15,403
,, supplied from Dairies			7,505
			22,908

In a limited number of cases, infants have been fed on Dried Milk with satisfactory results.

Of the 15,403 infants supplied through the Depôts, and of whom accurate records are kept, there were 1,432 cases in which the infant died, but of these 90 had been fed on the milk for less than one week, or had been irregularly fed on it; 1,114 were ill, some of them hopelessly ill when the milk was first supplied. Each death formed the subject of a careful inquiry, and it was found that out of the total number of infants who died only 228 were fairly healthy at the time of admission, and had been properly fed since. In these 228 cases the registered causes of death were as follows:—

Convulsions	52
Diarrhœa	35
Bronchitis	21
Pneumonia	36
Phthisis	1
Marasmus	5
Dentition	8
Inflammation of Stomach and Bowels	6
Whooping Cough	13
Blood Poisoning	3
Disease of Throat	2
Croup	1
Meningitis	3
Various other causes	42
	<hr/>
	228
	<hr/>

Out of the 15,403 coming promiscuously to the Depôts, at varied ages and in conditions of health below the average, the mortality was 93 per 1,000 as against 138 per 1,000 for the whole City, and 84 to 93 for the best districts and 213 to 216 for the worst, for the five years.

But it must be remembered that in the rate for the whole City, and for the best and worst districts, are included also, breast-fed infants; clearly if breast-fed infants were excluded, and artificially-fed infants only taken into account, the rate of mortality amongst them would be enormously higher, and would show even more forcibly the advantages of the sterilized food, which is, of course, an artificial food, over other methods of artificial feeding.

Expenditure and Income for the 5 years 1908 to 1912.

	1908.			1909.			1910.			1911.			1912.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Wages and Clothing	1,155	9	5	1,263	15	2	1,316	8	5	1,353	3	10	1,272	8	9
National Health Insurance (Corporation Contribution).....	164	0	1	178	5	0	176	6	0	167	18	8	5	8	9
Rents	68	8	10	67	11	1	67	19	3	67	18	1	164	6	0
Rates, Taxes and Water Rent	65	17	9	74	2	2	89	8	3	69	15	1	73	3	2
Lighting	34	7	5	41	6	0	40	10	4	41	4	0	63	0	8
Fuel	5	16	3	3	8	8	10	1	0	8	2	3	50	2	10
Printing and Stationery	36	8	8	43	6	5	41	15	2	42	6	10	14	19	5
Disbursements	29	10	6	31	10	10	36	0	2	38	17	1	36	13	1
Cleaning Windows, &c.	1,230	8	2	1,714	11	6	1,949	11	10	2,018	17	6	25	10	11
Stores (Milk, &c.)	13	12	0	14	2	0	13	12	0	13	12	0	2,074	4	5
Telephone Rent	40	2	4	48	7	0	134	8	9	61	19	3	13	12	0
Machinery, Fittings and Repairs.....	265	10	6	295	9	4	375	8	4	274	19	8	75	15	2
Bottles, Stoppers, &c.	21	0	10	46	10	7	66	10	5	35	15	1	382	16	3
Building Repairs, Alterations, &c.	250	9	2	252	8	8	161	9	8	454	7	4	51	7	4
Horsing and repairing Vans, Vans, and Hire of Float	2	11	0	2	11	0	2	11	0	2	11	0	310	5	8
Insurance													2	11	0
	3,383	12	11	4,077	5	5	4,482	0	7	4,651	7	8	4,616	5	5
Sale of Milk	1,154	13	4	1,328	13	3	1,554	4	6	1,678	18	0	1,761	1	2

SALE OF FOOD AND DRUGS ACT.

The Sale of Food and Drugs Act, and its various amendments, are designed to safeguard the honest trader from fraudulent competition, and to safeguard the public from fraud, imposition and danger, in regard to food and drugs.

Great care is necessary in procuring samples, and in submitting them for analysis, or very misleading results will ensue. All samples of food or drugs are taken either by, or under the superintendence of, Inspectors of the Health Department. It is of the greatest consequence that trained and practised persons should be employed for this purpose, and it is necessary from time to time to employ women or young people as agents, to go into the shop to ask for the articles, and as soon as the agent receives them, the Inspector enters the shop and completes the formalities which the Act requires.

Only a few purchases are made of those articles which, experience shows, are not likely to be adulterated. On the other hand, when enterprising firms, seeking new fields for adulteration and profit, place suspicious articles on the market, it becomes necessary, sometimes, to take a considerable number of the articles before the fraud can be detected and checked.

Any member of the public is entitled, under the Act, to have samples analysed upon payment to the analyst of a fee of 10s. 6d.

Summary of Samples submitted for Analysis from January 1st, 1912, to December 31st, 1912, and other Statistical Details.

INFORMAL SAMPLES.			FORMAL SAMPLES.						
Number taken.	Number genuine.	Adulterated.		Number taken.	Number genuine.	Adulterated.		Number cautions.	Information.
		Schedule A.	Schedule B.			Schedule A.	Schedule B.		
1	1	—	—	—	—	—	—	—	—
1	1	—	—	6	6	—	—	—	—
1	1	—	—	9	9	—	—	—	—
—	—	—	—	13	13	—	—	—	—
1	—	1	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	—	—
2	2	—	—	—	—	—	—	—	—
6	6	—	—	84	83	—	1	1	—
—	—	—	—	5	5	—	—	—	—
—	—	—	—	2	2	—	—	—	—
—	—	—	—	1	1	—	—	—	—
3	3	—	—	—	—	—	—	—	—

SUMMARY OF SAMPLES, &c.—*continued.*

INFORMAL SAMPLES.				FORMAL SAMPLES.				
Number taken.	Number genuine.	Adulterated.		Number taken.	Number genuine.	Adulterated.		Number cautions.
		Schedule A.	Schedule B.			Schedule A.	Schedule B.	
1	1	—	—	—	—	—	—	—
5	5	—	—	1	1	—	—	—
19	19	—	—	—	—	—	—	—
371	349	20	2	55	44	10	1	10
—	—	—	—	1	—	1	—	—
4	4	—	—	—	—	—	—	—
—	—	—	—	1	1	—	—	—
1	1	—	—	—	—	—	—	—
2	2	—	—	—	—	—	—	—
—	—	—	—	4	4	—	—	—
3	3	—	—	8	7	—	1	—
—	—	—	—	1	1	—	—	—
—	—	—	—	2	2	—	—	—
1	—	—	1	—	—	—	—	—
				Nature of Sample.				
				Borax and Honey				
				Brandy				
				Bread				
				Butter				
				Buttermilk				
				Cake Mixture				
				Calf's Feet Jelly				
				Camphorated Oil.....				
				Castor Oil				
				Cayenne Pepper				
				Cheese				
				Chicory				
				Chocolate Powder				
				Cider				

SUMMARY OF SAMPLES, &c.—*continued.*

INFORMAL SAMPLES.				FORMAL SAMPLES.						
Number taken.	Number genuine.	Adulterated.		Nature of Sample.	Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
4	4	—	—	Cocoa	24	24	—	—	—	—
6	6	—	—	Cod Liver Oil	—	—	—	—	—	—
7	7	—	—	Coffee	27	27	—	—	—	—
1	1	—	—	Coffee and Chicory	4	4	—	—	—	—
2	2	—	—	Coffee and Chicory Essence	—	—	—	—	—	—
—	—	—	—	Compound Liquorice Powder	3	3	—	—	—	—
6	6	—	—	Condensed Milk	2	2	—	—	—	—
61	61	—	—	Confectionery	14	14	—	—	—	—
2	2	—	—	Cornflour	12	12	—	—	—	—
1	1	—	—	Crab Meat	—	—	—	—	—	—
5	5	—	—	Cream	12	10	1	1	1	—
1	1	—	—	Cream Custard	—	—	—	—	—	—
1	1	—	—	Cream of Rice	—	—	—	—	—	—
2	2	—	—	Cream of Tartar	6	6	—	—	—	—

INFORMAL SAMPLES.				Nature of Sample.	FORMAL SAMPLES.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number caught.	Information.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
2	1	—	1	Ginger Ale	—	—	—	—	—	—
2	2	—	—	Ginger Beer	—	—	—	—	—	—
—	—	—	—	Ginger Wine	9	6	—	3	—	—
—	—	—	—	Gingerette Cordial	1	1	—	—	—	—
7	7	—	—	Glycerine	1	1	—	—	—	—
—	—	—	—	Gregory's Powder	1	1	—	—	—	—
—	—	—	—	Ground Almonds.....	3	3	—	—	—	—
—	—	—	—	Ground Mace	3	3	—	—	—	—
1	1	—	—	Health Salt	—	—	—	—	—	—
5	4	—	1	Honey	2	2	—	—	—	—
2	2	—	—	Infants' Food	—	—	—	—	—	—
9	9	—	—	Jam	25	24	1	—	1	—
1	1	—	—	Junket Powder	—	—	—	—	—	—
1	—	1	—	Lard	43	42	—	1	—	—

SUMMARY OF SAMPLES, &c.—Continued.

INFORMAL SAMPLES.				FORMAL SAMPLES.						
Number taken.	Number genuine.	Adulterated.		Nature of Sample.	Number taken.	Number genuine.	Adulterated.		Number caught'nd.	Information.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
1	1	—	—	Lard Substitute	2	1	—	1	—	—
4	4	—	—	Lemonade.....	—	—	—	—	—	—
—	—	—	—	Lemon Squash.....	2	1	1	—	—	—
—	—	—	—	Lime Juice Cordial	7	4	—	3	—	—
1	—	—	1	Lime Juice and Soda	—	—	—	—	—	—
1	1	—	—	Linseed Meal	—	—	—	—	—	—
1	1	—	—	Margarine	21	20	1	—	1	—
—	—	—	—	Margarine Cheese	1	1	—	—	—	—
—	—	—	—	Macaroni	1	1	—	—	—	—
—	—	—	—	Marmalade	8	7	—	1	—	—
4	4	—	—	Meat Extract	—	—	—	—	—	—
2	2	—	—	Medicated Wines.....	1	1	—	—	—	—
64	50	9	5	Milk	955	770	124	61	25	81
—	—	—	—	Mixed Spice	10	8	1	1	—	—

SUMMARY OF SAMPLES, &c.,—Continued.

INFORMAL SAMPLES.				FORMAL SAMPLES.				
Number taken.	Number genuine.	Adulterated.		Number taken.	Number genuine.	Adulterated.		Number cautions.
		Schedule A.	Schedule B.			Schedule A.	Schedule B.	
1	1	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	—
6	6	—	—	1	1	—	—	—
1	1	—	—	—	—	—	—	—
2	2	—	—	—	—	—	—	—
—	—	—	—	1	—	—	1	—
1	1	—	—	—	—	—	—	—
1	1	—	—	—	—	—	—	—
—	—	—	—	1	1	—	—	—
—	—	—	—	28	25	2	1	2
18	16	1	1	1	—	—	1	—
1	1	—	—	—	—	—	—	—
—	—	—	—	1	—	—	1	—

SUMMARY OF SAMPLES, &c.—continued.

INFORMAL SAMPLES.				FORMAL SAMPLES.						
Number taken.	Number genuine.	Adulterated.		Nature of Sample.	Number taken.	Number genuine.	Adulterated.		Number caut'nd.	Information.
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
—	—	—	—	Potted Shrimps	7	6	1	—	1	—
9	7	2	—	Preserved Fruit and Vegetables	—	—	—	—	—	—
—	—	—	—	Pressed Beef	1	1	—	—	—	—
10	10	—	—	Proprietary Articles	1	1	—	—	—	—
—	—	—	—	Raisin Wine	1	1	—	—	—	—
—	—	—	—	Raspberry Wine	2	2	—	—	—	—
5	5	—	—	Quinine Tonic	—	—	—	—	—	—
—	—	—	—	Rice	26	16	—	10	—	—
1	1	—	—	Rolled Oats	—	—	—	—	—	—
7	7	—	—	Rum	6	6	—	—	—	—
—	—	—	—	Sago	1	1	—	—	—	—
4	4	—	—	Sarsaparilla	—	—	—	—	—	—
3	3	—	—	Sausages	5	3	2	—	1	1
5	4	—	1	Sauce.....	—	—	—	—	—	—

SUMMARY OF SAMPLES, &c.—continued.

INFORMAL SAMPLES.				FORMAL SAMPLES.				
Number taken.	Number genuine.	Adulterated.		Number taken.	Number genuine.	Adulterated.		Number caut'nd.
		Schedule A.	Schedule B.			Schedule A.	Schedule B.	
1	1	—	—	—	—	—	—	—
—	—	—	—	5	5	—	—	—
1	1	—	—	1	1	—	—	—
4	4	—	—	1	1	—	—	—
1	1	—	—	—	—	—	—	—
13	13	—	—	—	—	—	—	—
—	—	—	—	12	10	—	2	—
7	7	—	—	—	—	—	—	—
—	—	—	—	4	4	—	—	—
—	—	—	—	4	4	—	—	—
8	8	—	—	34	34	—	—	—
21	21	—	—	—	—	—	—	—
15	14	—	1	—	—	—	—	—
1	1	—	—	—	—	—	—	—

SUMMARY OF SAMPLES, &c.—continued.

INFORMAL SAMPLES.				Nature of Sample.	FORMAL SAMPLES.					
Number taken.	Number genuine.	Adulterated.			Number taken.	Number genuine.	Adulterated.		Number cautions.	Information
		Schedule A.	Schedule B.				Schedule A.	Schedule B.		
5	5	—	—	—	—	—	—	—	—	
1	1	—	—	—	—	—	—	—	—	
1	1	—	—	—	—	—	—	—	—	
3	3	—	—	5	4	1	—	—	1	
19	19	—	—	22	21	—	1	—	—	
1	1	—	—	—	—	—	—	—	—	
10	10	—	—	12	12	—	—	—	—	
—	—	—	—	6	6	—	—	—	—	
2	2	—	—	—	—	—	—	—	—	
887	839	34	14	1,613	1,374	147	92	34	93	
668	641	12	15	1,557	1,285	146	126	65	68	

The figures
for 1911
were

Summary of Samples in which legal proceedings were instituted during the year
January 1st, 1912, to December 31st, 1912, together with result.

No. of Infor- mations.	Nature of Samples.	Nature of Offence.	RESULT OF LEGAL PROCEEDINGS.				Costs.
			No. of Convic- tions.	No. with- drawn or dismiss'd with costs.	No. with- drawn and dismiss'd without costs.	Fines.	
						£ s. d.	£ s. d.
44	Milk	Deficient in cream	20	18	6	27 0 0	33 0 0
9	„	Deficient in Cream & adulterated with water	5	3	1	10 10 0	6 10 0
25	„	Adulterated with water	19	5	1	36 0 0	22 6 6
1	„	Adulterated with borates	1	—	—	0 10 0	0 17 0
2	Skimmed Milk	Adulterated with water	2	—	—	3 10 0	1 14 0
9	Butter	Adulterated with foreign fat	9	—	—	37 0 0	9 2 6
1	„	Containing an excessive quantity of preservative	—	1	—	—	0 15 0
1	Malt Vinegar	Contained upwards of 50% of vinegar derived from sources other than malt	1	—	—	5 0 0	1 18 0
1	Sausages	Adulterated with borates	—	1	—	—	0 15 0
93			57	28	8	£119 10 0	£76 18 0

DETAILS OF SAMPLES OF MILK OBTAINED FOR CHEMICAL ANALYSIS.

	<u>1911.</u>	<u>1912</u>
Number of Samples purchased on week-days in Town ..	319	330
„ Informations	33	50
„ Samples taken at Railway Stations on week-days... ..	186	255
„ Informations	4	11
„ Samples purchased on Sundays in Town ...	144	188
„ Informations	14	19
„ Samples taken at Railway Stations on Sundays	166	155
„ Informations	1	1
„ Samples taken at City Hospitals	80	66
„ Informations	—	—
„ Samples taken at Corporation Milk Depôts...	40	25
„ Informations	—	—

MARGARINE ACT.

	<u>1911.</u>	<u>1912.</u>
Number of Visits to Wholesale Dealers in Margarine ...	923	788
„ Visits to Shops	6920	6622
„ Informations	—	—

SPECIAL EXAMINATIONS.

The following samples were submitted during 1912 for special examination:—

Nature of Sample	No. of Samples.	Nature of Sample.	No. of Samples.
Flour	1	Sand	3
Honey	1	Sardines	1
Milk	2	Urine	1
Pills	1	Wall Paper	2
Plate Powder	1	Water	2
Rag Flock	11	Total	26

FERTILISERS AND FEEDING STUFFS ACT, 1906.

On 1st January, 1907, a Fertilisers and Feeding Stuffs Act, which replaced the old Act of 1893, came into operation.

Under it the City Analyst was appointed official agricultural analyst, and the three inspectors under the Sale of Food and Drugs Act were appointed official samplers.

A certain remuneration was agreed to in respect of the work done under the Act.

The following table shows the number of samples procured during the year :—

Nature of Sample.	No. of Samples.	Nature of Sample.	No. of Samples.
Barley Meal	1	Liverine	1
Chicken Food	1	Maize Germ Meal	1
Chicken Meal	1	Makbar Meal	1
Cooked Locust Kernels.....	1	Mixed Fowl Corn	1
Dairy Meal	1	Nutted Dairy Cake	1
Decorticated Cotton Cake Meal	1	Oil Meal	2
Fattening Meal	1	Pea Meal	2
Fertilizer	1	Poultry Food	3
Ground Oats	1	Poultry Meal	1
Indian Meal.....	1	Sugar Feed Meal	1
Linseed Cake Meal	1	Total.....	25

POISONS AND PHARMACY ACT, 1908.

The Poisons and Pharmacy Act, 1908, came into operation on the 1st April, 1909.

The object of the Act is to regulate the sale of certain poisonous substances, and to amend the Pharmacy Acts. It is fully referred to in the Annual Report for 1909.

During the year 16 licenses were renewed under this Act, and 9 new licenses were granted.

BACTERIOLOGICAL EXAMINATIONS AND ANALYSES.

The Bacteriological Analyses comprise:—

1. The Examination of food-stuffs of various kinds.
2. The daily and monthly examination of the water supplied to the City.
3. The examination of suspected cases of rabies, anthrax, tuberculosis, &c.
4. The examination of rats taken on shipboard and in the town for the presence or absence of plague.
5. The examination for diagnostic purposes in suspected cases of diphtheria, typhoid fever, sputum and suspected cases of plague.

The total number of food-stuffs examined bacteriologically in 1912 was 1,433, a detailed list of which follows:—

SUMMARY OF FOOD-STUFFS.

SAMPLE.	No.	SAMPLE.	No.
Baked Beans	3	Margarine	28
Butter	30	Marmalade	5
Celery	2	Milks	735
Cheese	1	Meat, Cooked	14
Cockles	20	Meat Extract	1
Coffee and Milk	1	„ Pies	18
Condensed Milk	59	„ Potted	27
Cream	12	„ Tinned	44
Cream Cheese	8	Mincemeat	2
Cress	2	Mussels	37
Escallops	2	Mustard	2
Fish Paste	35	Nut Meat	1
„ Potted	5	Oysters	34
„ Tinned	80	Pasteurised Milk	10
Florence Cream	2	Periwinkles	14
Flour	1	Polony	7
Fruits, Preserved	18	Potato	1
Fruit Salad	3	Radishes	7
Golden Syrup	1	Sauce	14
Honey	5	Sausages	3
Ice Cream	8	Soups	20
Jam	33	Tomatoes, Tinned	2
Jelly	28	Watercress	22
Lemon Cheese	19	Whelks	2
Lettuce	5		
		TOTAL	1,433

SUMMARY OF ALL EXAMINATIONS 1912.

Examination of Foodstuffs	1,433
„ * Water Samples	441
„ Specimens from Suspected Typhoid Fever Cases	120
„ Miscellaneous (City Hospitals)	2
„ Rats	5,752
„ Miscellaneous Animal Specimens	130
„ Port Sanitary Specimens... ..	14
„ Special Examinations	11
Total	7,903

In addition to the above, 801 specimens of suspected tubercular, typhoid and diphtheria cases, as well as a number of tumours, were examined for the medical practitioners of the City.

* For particulars of the water samples, vide the separate Report to the Water Engineer.

MILK ANALYSES FOR THE YEAR.

735 Milks were examined for the presence of :—

1. The *Bacillus tuberculosis*.
2. The *Bacillus coli*.
3. The *Bacillus enteritidis sporogenes*, or allied forms.
4. Other bacteria.

The *Bacillus tuberculosis* indicates:—

1. That the animal from which the milk was taken was tubercular, or
2. That the pails into which the milk was received, or the hands of the milker were infected from previous contact with a diseased cow or person, or
3. That the milk became infected by contamination with other extraneous tubercular material.

The *Bacillus coli* largely indicates contamination with dirt of an intestinal origin.

The *Bacillus enteritidis sporogenes* indicates dust or intestinal contamination.

Detailed Table shewing particulars of Samples of Milk for 1912.

+ Signifies that Bacilli are present.

— Signifies that Bacilli are absent.

Month.	RAILWAY.					B. Ent. Sporog.	TOTAL.	TOWN.					B. Ent. Sporog.	TOTAL.	HOSPITAL.					B. Ent. Sporog.	TOTAL.	STERILIZED MILK DEPOT.					B. Ent. Sporog.	TOTAL.	TOTAL No. PER M'TH.	NEGATIVE.					TUBERCULAR.					Month.										
	No.	COLON BACILL.						No.	COLON BACILL.						No.	COLON BACILL.						No.	COLON BACILL.							No.	COLON BACILL.				No.	COLON BACILL.					No.	COLON BACILL.				No.	COLON BACILL.			
		c.c. 1	c.c. .1	c.c. .01	c.c. .001				c.c. 1	c.c. .1	c.c. .01	c.c. .001				c.c. 1	c.c. .1	c.c. .01	c.c. .001				c.c. 1	c.c. .1	c.c. .01	c.c. .001					c.c. 1	c.c. .1	c.c. .01	c.c. .001		c.c. 1	c.c. .1	c.c. .01	c.c. .001			c.c. 1	c.c. .1	c.c. .01	c.c. .001		c.c. 1	c.c. .1	c.c. .01	c.c. .001
January.	5 3 8 4	+	+	+	+	3	20	3 — — 10	— — — +	— — — +	— — — +	— — — +	—	13	2 — 2 6	— + + +	— — — +	— — — +	— — — +	— — — +	— — — +	— — — +	—	10	— — — —	— — — —	— — — —	— — — —	— — — —	—	43	11	7	4	—	22	—	2	1	—	3	January.								
February.	49 — — —	— — — —	— — — —	— — — —	— — — —	—	49	6 5 1 10	— + + +	— — — +	— — — +	— — — +	—	22	1 — — 11	— — — +	— — — +	— — — +	— — — +	— — — +	— — — +	— — — +	—	12	— — — —	— — — —	— — — —	— — — —	— — — —	—	83	—	—	1	—	1	1	1	2	—	4	February.								
March.	— 1 1	— + +	— + +	— + +	— + +	—	2	19 8 9 2 5	— + + + +	— — + + +	— — + + +	— — + + +	—	43	1 1 5 5	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	—	12	1 4 5 4	— + + +	— + + +	— + + +	— + + +	—	14	71	—	8	4	1	13	—	1	—	7	8	March.							
April.	2 — 6 20	— + + +	— + + +	— + + +	— + + +	—	28	6 1 2 4 13	— + + + +	— + + + +	— + + + +	— + + + +	—	26	1 1 3 5	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	—	10	— — — —	— — — —	— — — —	— — — —	— — — —	—	64	13	6	5	—	24	2	—	—	—	2	April.								
May.	7 1 4 4 16	— + + + +	— + + + +	— + + + +	— + + + +	—	32	3 2 — 2 19	— + — + +	— — — + +	— — — + +	— — — + +	—	26	— 3 — 12	— + — +	— + — +	— + — +	— + — +	— + — +	— + — +	— + — +	—	15	— 6 — — —	— + — — —	— + — — —	— + — — —	— + — — —	—	6	79	1	1	4	—	6	—	2	—	—	2	May.							
June.	— — — 26	— + + +	— + + +	— + + +	— + + +	—	26	9 4 4 4 12	— + + + +	— + + + +	— + + + +	— + + + +	—	33	— 2 8	— + +	— + +	— + +	— + +	— + +	— + +	— + +	—	10	— — — —	— — — —	— — — —	— — — —	— — — —	—	69	8*	1	1	—	10	—	6	—	—	—	6	June.							
July.	— 3 6 1	— + + +	— + + +	— + + +	— + + +	—	10	3 4 3	— + +	— + +	— + +	— + +	—	10	— 1 —	— + —	— + —	— + —	— + —	— + —	— + —	— + —	—	1	— — — —	— — — —	— — — —	— — — —	— — — —	—	21	1	3	—	—	4	—	—	—	—	—	July.								
August.	10 4 6 1 —	— + + + —	— + + + —	— + + + —	— + + + —	—	21	27 4 — 6	— + — +	— — — +	— — — +	— — — +	—	37	1 1 2 6	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	—	10	— 2 1 2	— + + +	— + + +	— + + +	— + + +	—	5	73	2	2	—	—	4	1	3	—	—	4	August.								
September.	4 3 7 — 6	— + + — +	— + + — +	— + + — +	— + + — +	1 + 10 c.c.	20	23 2 4 3 4	— + + + +	— — + + +	— — + + +	— — + + +	—	3† 36	— 2 1 3	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	—	6	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	—	—	65	5	3	—	—	8	—	—	1	—	1	September.								
October.	18 — 1 1 17	— — + + +	— — + + +	— — + + +	— — + + +	—	37	12 4 6 1 7	— + + + +	— + + + +	— + + + +	— + + + +	—	30	— 1 5	— + +	— + +	— + +	— + +	— + +	— + +	—	6	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	—	—	73	4	2	—	—	6	3	2	—	—	5	October.								
November.	3 3 3 5 13	— + + + +	— + + + +	— + + + +	— + + + +	—	27	18 — 3	— — +	— — +	— — +	— — +	—	21	2 — 1 4	— — + +	— — + +	— — + +	— — + +	— — + +	— — + +	—	7	— 2 2 1	— + + +	— + + +	— + + +	— + + +	—	6	61	15	1	1	—	17	3	1	—	1	5	November.								
December.	3 — — — 4	— — — — +	— — — — +	— — — — +	— — — — +	—	7	6 — 1 1 9	— — + + +	— — + + +	— — + + +	— — + + +	—	17	— 1 1 3	— + + +	— + + +	— + + +	— + + +	— + + +	— + + +	—	5	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	—	4	33	3	1	1	2	7	2	1	—	2	5	December.								
Ttl.							279							317											104							35	735	63	35	21	3	122	12	19	11	3	45	Ttl.						

NOTE.—*These figures include a number of Milks which were not inoculated owing to the scarcity of guinea-pigs.

† Not examined.

Presence of the *Bacillus Tuberculosis*.

Of the 735 samples examined for tubercle, 122 guinea pigs died before the tubercular test was complete; 8 of the milk samples were not inoculated, and are included under those returned negative, guinea pigs at this time of the year being extremely difficult to obtain.

Of the 613 remaining samples, 45 proved tubercular, of which 26 were railway-borne milks and 19 taken in the town.

The percentage this year is therefore:—Railway-borne, 6·2 per cent.; Town, 5·9 per cent.

It is a very serious matter that tubercle is so widespread in milk when it is remembered that one tubercular cow may be the means of infecting the milking utensils, the hands of the milker, and, in consequence, even the teats of the other healthy animals. Regulations dealing with infected animals cannot therefore be too stringent.

**Table showing the number of samples of milk examined
Bacteriologically for Tubercle Bacilli from 1896
to 31st December, 1912.**

Year.	Total Number of Samples Taken.	Town Samples.		Country Samples.	
		No. taken.	Tubercular.	No. taken.	Tubercular.
1896	119	83	4	36	5
1897	150	63	4	87	5
1898	112	84	7	28	5
1899	352	167	1	185	15
1900	560	255	4	305	5
1901	566	254	2	312	20
1902	595	213	1	382	32
1903	582	231	2	351	19
1904	571	201	4	370	37
1905	560	212	1	348	14
1906	530	209	3	321	22
1907	451	194	4	257	14
1908	528	256	5	272	10
1909	600	259	4	341	10
1910	612	289	4	323	15
1911	661	315	3	346	18
1912	735	320	19	415	26
Totals.....	8,284	3,605	72	4,679	272

TABLE SHOWING (A) SAMPLES OF MILK DRAWN DIRECT FROM SEPARATE COWS, (B) SAMPLES OF MIXED MILK, TOGETHER WITH OTHER PARTICULARS RELATING TO SAMPLES OF MILK TAKEN FOR BACTERIOLOGICAL EXAMINATION FROM JANUARY 1ST, 1901, TO DECEMBER 31ST, 1912.

YEAR.	TOWN.					COUNTRY.					Total number of Samples taken during the Year.		
	SAMPLES.			TUBERCULAR.		SAMPLES.			TUBERCULAR.				
	A Direct from Cows, taken in routine practice.	B Mixed Milk from Town Cows.	Total.	A. Direct from Cows.	B Mixed Milk.	Total.	A Direct from Cows at affected farms.	B Mixed Milk from Country Cows.	Total.	A Direct from Cows.		B Mixed Milk.	
													Total.
1901	215	39	254	2	—	2	15	297	312	2	18	20	566
1902	180	33	213	1	—	1	30	352	382	6	26	32	595
1903	203	28	231	2	—	2	7	344	351	1	18	19	582
1904	163	38	201	2	2	4	16	354	370	4	33	37	571
1905	196	16	212	1	—	1	10	338	348	1	13	14	560
1906	143	66	209	3	—	3	14	307	321	1	21	22	530
1907	90	104	194	3	1	4	5	252	257	2	12	14	451
1908	141	115	256	1	4	5	5	267	272	1	9	10	528
1909	147	112	259	4	—	4	8	333	341	4	6	10	600
1910	174	115	289	1	3	4	5	318	323	2	13	15	612
1911	193	122	315	2	1	3	10	336	346	3	15	18	661
1912	119	201	320	*10	9	19	73	342	415	6	20	2	735
Totals.....	1964	989	2953	32	20	52	198	3840	4038	33	204	237	6991

* Samples taken direct from suspicious animal.

TABLE SHEWING THE DISTRIBUTION OF THE COLON BACILLUS IN RAILWAY BORNE, TOWN, HOSPITAL AND STERILIZED MILK DEPÔTS.
SAMPLES OF MILK.

SOURCE.	THE COLON BACILLUS.										B. ENTERITIDIS SPOROGENES.			
	No. of Sam- ples,	ABSENT IN 1 C.C.		PRESENT IN 1 C.C. BUT ABSENT IN .1 C.C.		PRESENT IN .1 C.C. BUT ABSENT IN .01 C.C.		PRESENT IN .01 C.C. BUT ABSENT IN .001 C.C.		PRESENT IN .001 C.C.		ABSENT.		PRESENT.
		Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	Times.	Per cent.	
Railway Borne Milks	279	96	34.5	16	5.7	28	10.1	31	11.1	108	38.5	275	99.3	4 1.5
Town Milks	317	135	43.5	30	9.4	27	8.5	24	7.6	98	30.9	317	100	—
Hospital Milks.....	104	5	4.8	6	5.7	10	9.6	15	14.5	68	65.4	104	100	—
Sterilized Milk Depôts	35	—	—	5	14.2	13	37.1	6	17.1	11	31.4	35	100	—

RESULTS OF ANALYSES OF BUTTER, CONDENSED MILK, CREAM, CHEESE,
ICE CREAM and SHELL FISH.

Butter.

30 Samples of Butter were examined, the *Bacillus coli* being found in four samples and a large number of bacteria were found in four other cases.

Condensed Milks.

59 Samples were submitted for investigation, the average number of bacteria present being 10,441 per gram; the *colon bacillus* was not found in any of the samples.

Cream Cheese.

The *colon bacillus* was present in 1 gram in all the eight samples examined with one exception; *B. enteritidis sporogenes* was not found.

Cream.

12 Samples were examined, and 10 samples showed the presence of the *colon bacillus*.

Three of the samples were tested for the presence of the *tubercle bacillus* by inoculation, and one sample proved to be tubercular.

Ice Cream.

Eight Samples were submitted for analysis, seven contained the *colon bacillus* in large numbers, and in one sample the presence of *B. enteritidis sporogenes* was shown.

Shell Fish.

The total number of shell fish examined as shown in the accompanying table was 107.

Shell fish are often eaten uncooked and are in consequence liable to convey infection if they become contaminated with pathogenic bacteria.

It is well known that contamination may occur in transit and in the storing of the fish, as well as in the collecting ground.

Therefore, as in previous years, a series of samples were analysed, and evidence of contamination was found in most of the samples.

Table shewing the presence and absence of the Colon Bacillus
and B. Ent. Sporog. in Shell Fish.

Sample.	No. of Times	COLON BACILLI. In a Shellfish.					No. of Times	B. ENTERITIDIS SPOROGENES. In a Shellfish.					Total No.
		·1	·01	·001	·0001	·00001		·1	·01	·001	·0001	·00001	
Mussels	5	—	—	—	—	—	—	—	—	—	—	—	37
	11	+	—	—	—	—	—	+	—	—	—	—	
	12	+	+	—	—	—	1	+	+	—	—	—	
	9	+	+	+	—	—	—	+	+	+	—	—	
Cockles	2	—	—	—	—	—	—	—	—	—	—	—	20
	3	+	—	—	—	—	5	+	—	—	—	—	
	7	+	+	—	—	—	1	+	+	—	—	—	
	8	+	+	+	—	—	—	+	+	—	—	—	
Periwinkles...	—	—	—	—	—	—	—	—	—	—	—	—	14
	9	+	—	—	—	—	—	—	—	—	—	—	
	4	+	+	—	—	—	—	—	—	—	—	—	
	1	+	+	+	—	—	—	—	—	—	—	—	
Oysters	3	—	—	—	—	—	—	—	—	—	—	—	34
	16	+	—	—	—	—	—	—	—	—	—	—	
	10	+	+	—	—	—	—	—	—	—	—	—	
	5	+	+	+	—	—	—	—	—	—	—	—	
Whelks	—	—	—	—	—	—	—	—	—	—	—	—	2
	1	+	—	—	—	—	—	—	—	—	—	—	
	1	+	+	—	—	—	—	—	—	—	—	—	
										Total 1			107

The total number of foodstuffs examined bacteriologically up to 1912 are as follows :—

1896	...	...	...	...	...	...	122
1897	...	...	...	...	...	...	162
1898	...	...	...	...	...	...	311
1899	...	...	...	...	...	...	505
1900	...	...	...	...	...	...	1,067
1901	...	...	...	...	...	...	1,055
1902	...	...	...	...	...	...	1,097
1903	...	...	...	...	...	...	1,061
1904	...	...	...	...	...	...	1,107
1905	...	...	...	...	...	...	1,147
1906	...	...	...	...	...	...	1,075
1907	...	...	...	...	...	...	1,028
1908	...	...	...	...	...	...	1,043
1909	...	...	...	...	...	...	1,216
1910	...	...	...	...	...	...	1,225
1911	...	...	...	...	...	...	1,280
1912	...	...	...	...	...	...	1,433
							<hr/>
							15,934
							<hr/>

City Hospitals.

The following specimens have been examined for the City Hospitals:—

SUSPECTED TYPHOID FEVER.

Positive	...	...	...	...	58	
Negative	...	...	...	...	45	
Indefinite	...	...	...	...	17	
					<hr/>	120
Sputum	...	...	...	...	1	
Lung Tissue	...	...	...	...	1	
					<hr/>	2
					<hr/>	122

**Plague Examinations and Rats,
Number examined during each month.**

1912.	Port.	Town.	Total.
January	281	30	311
February	289	66	355
March	232	38	270
April	190	23	213
May	363*	68	431*
June	290	86	376
July	347	17	364
August	722†	66	788
September	312	201	513
October	423	213	636
November	315	450	765
December	366	364	730
Totals	4,130	1,622	5,752

* In one rat from the s.s. "Italian Prince," B. Pestis was found.

† In two rats from Warehouses B. Pestis was found.

Number of Rats examined from January 1902 to December 1912.

Year.	Port.	Town.	Total.
1902	703	—	703
1903	560	23	583
1904	3,332	88	3,420
1905	5,251	1,186	6,437
1906	2,979	1,860	4,839
1907	7,582	1,232	8,814
1908	1,637	309	1,946
1909	1,769	597	2,366
1910	1,630	507	2,137
1911	2,927	393	3,320
1912	4,130	1,622	5,752
Totals	32,500	7,817	40,317

ANTHRAX.

The following specimens were examined for Anthrax:—

Nature of Specimen.	B. Anthracis.		Total.
	Present in.	Absent in.	
Blood	6	7	13
Bran	—	2	2
Cake	—	6	6
Cotton	—	5	5
Cow's Ear.....	2	3	5
Hay	—	12	12
Hides, Dry	1	9	10
Meal	1	25	26
Nuts	—	2	2
Oats	—	1	1
Swab	—	1	1
Wool	—	10	10
Hair, Horse	2	6	8
Total.....	12	89	101

TUBERCLE.

Nature of Specimen.	TUBERCLE BACILLI.		Total
	Present in	Absent in	
Meat—Gland	*	—	1
Liver	1	—	1
Lung	1	—	1
Lymphatic Gland	1	—	1
Udders	10	—	10
Udder and Gland	1	—	1
Spleen	1	—	1
	15	—	16

* 1 Doubtful.—Gland originally in a suppurating condition, but impossible to say whether tubercular or not.

Nature of Specimen.				Present in	Absent in	Total.
Mastitis						
Udders	...	...	...	3	—	3
Actinomycosis—						
Ox Tongue	...	...		1	—	1
Sarcoma—						
Kidney—Calf	...	...		
Lung	,,	...	...	All diffuse Melanotic Sarcoma		3
Liver	,,	...	...	

MISCELLANEOUS.

Nature of Specimen.				Result of Examination.							Number.	
Udder	...	...	...	Cancer	...	...	...	...	...	...	1
Pig's Liver	...	...	...	Inflammatory changes	...	...	...	...	...	...	1
Pork	...	...	...	No bacteriological evidence as to cause of colouration	...	...	...	...	...	...	1
Rat	...	...	...	Animal in a very advanced state of putrefaction							1
Rag Flock	...	...	...	Large number of Bacteria present per gram in each sample	...	...	...	...	...	...	6
Sand	...	...	1	1,500 Colon Bacilli present per c.c.							3
			2	300 Colon Bacilli present per c.c.								
			3	200 Colon Bacilli present per c.c.								
Water	...	...	1	61 Bacteria present per c.c., 2 Colon Bacilli per c.c.							2
			2	27 Bacteria present per c.c., Colon Bacilli absent								
												15

RABIES.—Two dogs' heads were submitted for investigation, but both proved negative.

Summary of Special Samples.

Anthrax	...	...	..	...	...	101
Tubercle	...	...	...	...	...	16
Mastitis	...	...	...	...	...	3
Actinomycosis	...	...	...	...	...	1
Sarcoma	...	...	...	...	...	3
Miscellaneous	...	...	..		4	
„	(Health Dept.)	...			11	
					—	15
Rabies	...	...	...	...	...	2
					—	141

Port Sanitary Authority—

Mussels	...	...	...	...	...	11
Tinned Lobster	...	...	...	...	...	1
Bacon	...	...	...	...	...	1
Water	...	..	...	...	...	1
					—	14

Total ... 155

WATER ANALYSES.

The quality of the Water as supplied to Liverpool as is shewn on the Monthly and Daily Examinations, demonstrates that its bacterial purity has been well maintained during 1912.

Number of Bacteria present per c.c. in the daily samples—

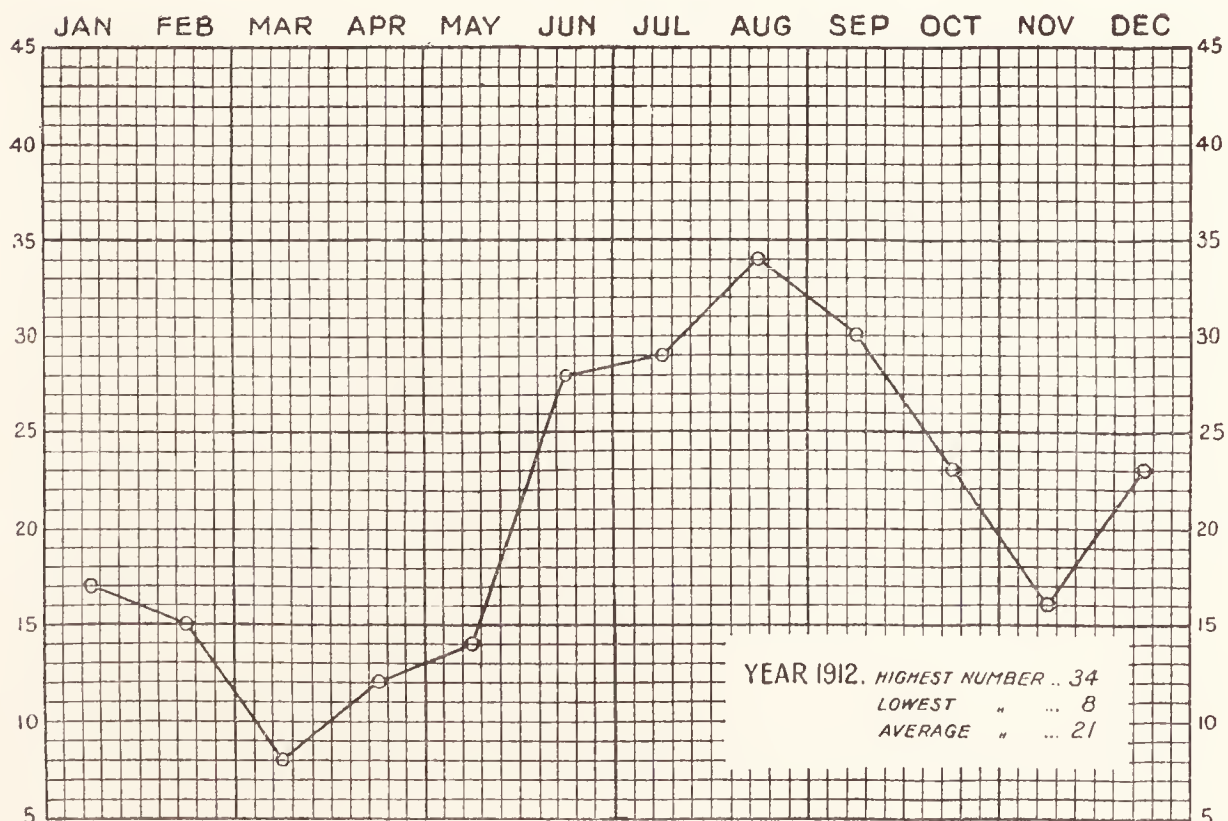
Year.	Highest Number.	Lowest Number.	Average.
1907	37	19	28
1908	29	10	19
1909	31	17	23
1910	50	16	30
1911	37	17	27
1912	34	8	20

The total number of Water analyses were..... 365 Daily
 54 Monthly
 22 Specials

Total..... 441

For particulars of Special Sample see Water Engineer's Report.

CHART ILLUSTRATING MONTHLY VARIATION IN THE NUMBER OF BACTERIA.



Investigation of the Prescot Water and also of the Well Water
during 1912.

[illegible][illegible]

Table shewing the number of Bacteria present per c.c., and the presence and absence of the Colon Bacillus.

1912. Month.	PER MONTH.	COLON BACILLI.						B. Ent. Sporogenes in 10 c.c.	Total Number of Samples
	Average Number of Bacteria per c.c.	Absent from 50 c.c.	Present in 50 c.c. but absent from 40 c.c.	Present in 40 c.c. but absent from 30 c.c.	Present in 30 c.c. but absent from 20 c.c.	Present in 20 c.c. but absent from 10 c.c.	Present in 10 c.c. but absent from 1 c.c.		
January ...	17	31	—	—	—	—	—	—	31
February	15	28	—	1	—	—	—	—	29
March	8	31	—	—	—	—	—	—	31
April	12	27	1	1	1	—	—	—	30
May	14	31	—	—	—	—	—	—	31
June	28	30	—	—	—	—	—	—	30
July	29	31	—	—	—	—	—	—	31
August ...	34	31	—	—	—	—	—	—	31
September	30	30	—	—	—	—	—	—	30
October ...	23	31	—	—	—	—	—	—	31
November	16	30	—	—	—	—	—	—	30
December	23	31	—	—	—	—	—	—	31
									366

CLEANSING AND SCAVENGING.

CLEANSING AND SCAVENGING.

The washing of streets, courts, back passages, &c., and the improvements in scavenging have been extended during the past year with beneficial results.

During the summer season the street washing was continued:—

225 streets	were washed once a week,
163 streets	„ „ twice a week,
75 streets	„ „ three times a week, and
275 streets	„ „ as occasion required,

and all passages and tunnel entrances to courts were also regularly washed.

Owing to the defective planning of many minor streets and the absence of adequate back passages some difficulties have yet to be overcome before the collection and removal of domestic refuse can be regarded as satisfactory. The concessions which have been made by the Health Committee for the substitution of sanitary ashbins for the old insanitary ashpits have resulted in a distinct sanitary advantage.

The following is a statement of the number of improved sanitary ashbins which were fixed at the 31st December, 1912:—

In properties assessed at over £10 per annum and new	
properties	39,544
In properties of £10 assessment and under.....	32,269
Total.....	<u>71,813</u>

The number of brick ashpits has been reduced from 65,000 to approximately 16,000.

Under the Bye-laws now in force, all newly-erected houses must be provided with suitable ashbins.

All private, domestic and office drains are flushed by the City Engineer's Staff twice a year, and there can be no question that a more frequent and very thorough flushing would be attended with great advantage.

The City Engineer has kindly supplied the following tables, which indicate the operations carried out by the Cleansing Staff under his control:—

TABLE No. 1.
NIGHT SERVICE
FOR EMPTYING COURT, &c., ASHPITS AND MIDDENS.

Middens have been practically abolished in the Old City, and consequently the operations of the night service are limited to the removal of domestic and office refuse from the neighbourhood of the Exchange, where it is impracticable to perform the work during business hours.

In the year 1900 an Improved Sanitary Ashbin was introduced, and 2,424 of these Bins have now been fixed for the use of Courts.

Notices Received.	Collec- tions from Ashpits, etc.	Quantity of Ashes Collected.	Quantity of Refuse Deposited at Chisenhale Street Depot.	Average Working Staff per night.				Analysis of Work.		Average quantity removed from each Ashpit at each Collection
				Ashpit Men.	Wharf Men.	Carts.	Horses.	Loads per Man per Night.	Loads per Cart per Night.	
No.	No.	Loads.	Loads.	No.	No.	No.	No.			Cart Loads.
176	1,249	1,125	1,125	3·0	1·0	1·0	1·0	1·51	4·53	·90

TABLE No. 2.

SERVICE FOR THE COLLECTION AND REMOVAL OF DRY ASHPIT ASHES.

The number of notices received to empty ashpits during the year 1912 was 0.39 per cent. of the total collections.

The number of brick ashpits within the City is approximately 16,000.

From the year 1898 to the 31st December 12, Improved Sanitary Ashbins have been fixed as follows:—

In properties of over £10 assessment, and new properties	...	...	39,544
In properties of £10 assessment and under ...	...	...	32,269
			71,813

During this period the number of brick ashpits has been reduced from approximately 65,000 to 16,000.

In premises unsuitable for fixture bins, 37,250 loose bins have been provided.

During the year 1912 each ashpit was emptied on an average 10.87 times. The total quantity of refuse collected was 26,796 loads, or 0.15 of a load from each ashpit at each collection.

Notices Received.	Total Collections from Ashpits.	Dry Ashes.										Average Daily Working Staff.		Analysis of Work.		Average quantity removed from each Ashpit at each Collection	
		Quantity of Refuse Removed.	Depots at which Refuse was Deposited.								Ashpit Men.	Carts and Wagons.	Horses.	Loads per Man per day.	Loads per Cart per Day.		
No.	No.	Loads.	Chisenhale Street.	Rathbone Road	Destructor.	Smithdown Road	Destructor.	St. Domingo	Destructor.	Lavrock Bank	Destructor.	Garston Destructor.	Sandhills.	Various Tips, &c.	Loads.	Loads.	Loads.
690	173,942	26,796	5,552	2,353	5,237	4,152	2,430	1,450	642	4,980		78.63	17.77	13.79	1.10	4.87	.15

TABLE No. 4.

SERVICE FOR FLUSHING AND CLEANSING TROUGH WATER-CLOSETS, &c.

The frequent flushing of trough water-closets is a sanitary measure, this type of closet being provided principally in the more densely-populated areas of the City.

A large number of the public urinals and trough water-closets are also cleansed and disinfected twice daily during the Summer season, and once daily during the remaining part of the year.

Underground Urinals.	Overground Urinals.	Trough Water-Closets.	Average Working Staff per day.	
			Trough W. C. Men.	Urinal Men.
No. and Stalls. 28—248	No. and Stalls. 146—517	No. 934	No. 22·30	No. 16·80

TABLE No. 5.
SERVICE FOR THE CLEANSING OF STREETS, COURTS, AND PASSAGES, AND COLLECTION OF REFUSE.

Total Quantity of Refuse Collected.	Depôts at which Refuse was Deposited.						Average Daily Staff.				Average Number of Loads Removed Daily per Cart and Motor.
	Chisenhale Street.	Sandhills.	Waverlee.	Destructors.	Various Tips, &c.		Sweeping Machines.	Average Number of Men Employed.	Carts.	Horses.	
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.		Per day.	Per day.	No.	No.	No.
53,768	25,711	6,482	4,436	—	17,139		4.73	462	53.57 Motors 1.27	58.30	2.91

TABLE No. 6.
CLEANSING AND REMOVAL OF REFUSE FROM STREETS, COURTS, AND PASSAGES ON SUNDAYS.

On Sunday mornings a number of the principal streets in the central parts of the City are cleansed, and, as a sanitary measure, the domestic refuse in certain districts of the City is also collected.

Street Sweepings.										Average Daily Staff.			
Depôts where Deposited.													
Removed.		Chisenhale Street.			Sandhills.		Wavertree.		Tips.				
Saleable Refuse.	Unsaleable Refuse.	Total.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Saleable Refuse.	Unsaleable Refuse.	Men.	Horses.	Motor Wagon.
Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	Loads.	No.	No.	No.
554	361	915	498	262	26	68	30	—	—	33	224·82	9·36	6·44

TABLE No. 7.

SERVICE FOR STREET WATERING

In connection with Street Watering approximately 39 million gallons of Water were distributed during the season, in addition to which a large quantity was used for street washing.

Number of Days or which Carts were out during year.	Quantity of Water Distributed.		Average Daily Staff employed during the season.		Average No. of Loads distributed Daily per Cart.
	Large Loads.	Small Loads.	Watermen.	Motor Tank Carts and Horses.	
143	114,161	29,669	21.60	24.73	Motor Tank ... — Horse-cart ... 31.19 Hand-cart ... 40.60

In addition to the figures in the above table 1456 loads of water were distributed on the drives of Seaton and Newham Parks.

DUST LAYING.

During the season 276,300 cu. yards Carriageways were treated with Dust Laying Composition.
Of which 162,632 " " in Seaton and Newham Parks.

TABLE No. 8.

REMOVAL OF GARBAGE FROM ABATTOIR.

Loads Removed during year.	Where Deposited.		
	Chisenhale Street.	Sandhills.	Collingwood Dock.
1.077	1.077	—	—

TABLE No. 9.

RETURN OF HORSE MANURE COLLECTED FROM FIRE STATIONS AND CORPORATION STABLES,

AND DELIVERIES TO CHISENHALE STREET DEPÔT, &c.

TOTAL QUANTITY DEALT WITH DURING THE YEAR.	DEPÔTS AT WHICH MANURE WAS DEPOSITED.		
	CHISENHALE STREET.	SANDHILLS.	WAREHOUSE.
	Loads.	Loads.	Loads.
1.088	1.427	828	238

Of the above 621 loads were collected from Fire Stations.

TABLE No. 10.
DESPATCHES OF MANURE AND REFUSE.

DEPÔTS.	Quantity of Saleable Refuse.			Quantity of Unsaleable Refuse.				Clinker to Works.	Grand Total.
	Street Sweepings	Mixture.	Ordinary Refuse to Farmers.	Total.	Sea.	Des- tructors.	Tips.	Ordinary Refuse to Farmers.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Chisenhale St., by Flats...	11,760	3,552	38,882	54,194	...	...	...	...	54,194
Sandhills by Rail ...	...	116	6,238	6,354	...	...	...	...	6,354
Wavertree do. ...	4,406	...	...	4,406	...	...	...	...	4,406
Chisenhale Street and Sandhills, <i>via</i> Collingwood } Dock per Barge "Beta" } Clinker per "Beta" .....	...	...	...	...	17,268	...	...	...	17,268
	...	...	...	...	13,441	...	...	...	13,441
Charters Street Destructor.	...	...	...	...	...	53,823	...	...	...
Rathbone Road " .....	...	...	...	...	...	13,381	...	...	...
Smithdown Road " .....	...	...	...	...	...	27,332	...	...	...
St. Domingo " .....	...	...	...	...	...	34,498	...	...	164,876
Garston " .....	...	...	...	...	...	7,317	...	...	...
Lavrock Bank " .....	...	...	...	...	...	28,525	...	...	...
Sundry Tips.....	...	...	2,350	2,350	...	...	30,233	10,861	43,444
Clinker to Tips .....	...	...	...	...	...	...	10,939	...	10,939
Ground Clinker to Works...	...	...	...	...	...	...	...	15,065	15,065
Rough Clinker to Works ...	...	...	...	...	...	...	...	6,781	6,781
Totals	16,166	3,668	47,470	67,304	30,709	164,876	41,172	21,846	336,768

The foregoing Table shows that not less than 336,768 tons of Town's refuse have been disposed of, and this large total does not represent the actual quantity collected and carted to the Wharves, as during the Winter months a proportion of the street sweepings is in a liquefied condition, and drains away before despatch of the refuse from the Wharves.

TABLE No. 11

HORSES.

DAILY AVERAGE NUMBER EMPLOYED ON CLEANSING WORK.

Night Ashes.	12.60	88.26	58.30	4.73	1.85	1.93	10.82	1.25	1.48	16.47	1.63	200.05
Dry Ashes.												
Bell Ashes.												
Street Cleansing.												
Sweeping Machines.												
Markets.												
Tar Spraying.												
Watering.												
Abattoir.												
Canals.												
Destructors.												
Various.												
Daily Average Total												

TABLE No. 12.
AVERAGE DAILY STAFF OF MEN EMPLOYED.

General	Inspectors.	5.	7.	4.	16.	Total.															
	Timekeepers.																				
	Clerks.																				
Night Service.	Working Foreman.	1.	3.	1.	5.	Total.															
	Midden Men.																				
	Wharf Man.																				
Day Service.	Inspectors.	22.0	10.13	9.23	5.18	256.25	286	74	53.80	22.76	11.10	1.33	39.10	56.14	71.89	8.0	11.0	2.70	4.80	872.15	Total.
	Watchmen.																				
	Watermen.																				
	Tar Spraying.																				
	Sweepers and Casual Men.																				
	Cart Followers (Sweeping and Bell and Box Ashes).																				
	Passage Men.																				
	Washing Streets & Passages																				
	Gully Men.																				
	Washing Courts.																				
	Trough Water Closet and Urinal Men.																				
	Orderly Boys.																				
	Ash Men.																				
	Boat Men.																				
	Hopper Barge Crew.																				
	Waste Paper.																				
	Private Work.																				
	Wharves, Depôts, &c.	Foreman.	1.0	15.0	2.0	8.0	2.0	28.0	Total.												
		Labourers.																			
Labourers.																					
Labourers.																					
Labourers.																					
Grand Total.	Chisenhale St. and Sandhills.																				
	Waverree.																				
	Various Tips.																				
	Collingwood Dock.																				

INSANITARY PROPERTY.

INSANITARY PROPERTY.

TYPE AND SITUATION.

The special type of insanitary dwelling dealt with from time to time by the Housing Committee of the City Council is fully described in the Medical Officer of Health's Report of 1911; this report also explains how it came about that Liverpool was burdened with such a large amount of insanitary property.

During the years 1865 to 1904, eighteen Presentments were made by the Medical Officer of Health, under the Act of 1864, in respect to approximately 6,300 houses, as being unfit for human habitation, and these were subsequently demolished.

In 1901 the first Official Representation under the Housing of the Working Classes Act was made, and up to the present time 18 unhealthy areas have been dealt with under this Act, viz.:—

Date of Representation.	Area.	Population.	Houses.
July, 1901	Hornby Street	2431	534
"	Upper Mann Street	743	176
September, 1906	Burlington Street	607	144
March, 1907 ...	Beau Street	532	128
"	Bevington Street.....	1154	295
"	Holly Street	563	124
"	Frank Street	627	127
"	Grafton Street	304	70
August, 1907 ...	Saltney Street	88	68
June, 1912	Prince Edwin Street	737	187
"	Rathbone Street	445	128
"	Mason Street	301	107
"	Saltney Street	267	60
"	Blenheim Street	230	48
"	Penrhyn Street	488	116
"	Gore Street	78	76
"	Sparling Street	153	33
"	Jordan Street	Nil	Nil

In these Official Representations there were also included properties other than dwelling-houses required for the purposes of the general scheme.

In addition to the work of the Housing Committee under the Local and General Acts, commercial enterprise and the needs of public and private companies have assisted in the abolition of insanitary property. During the years 1907 to 1912, 241 insanitary houses have been demolished as the result of business extension.

Models, &c.

To place on record the insanitary conditions which existed, and to illustrate the contrast by the improvement in the housing of the people, photographs and models have been prepared, which will always be available for reference in the future.

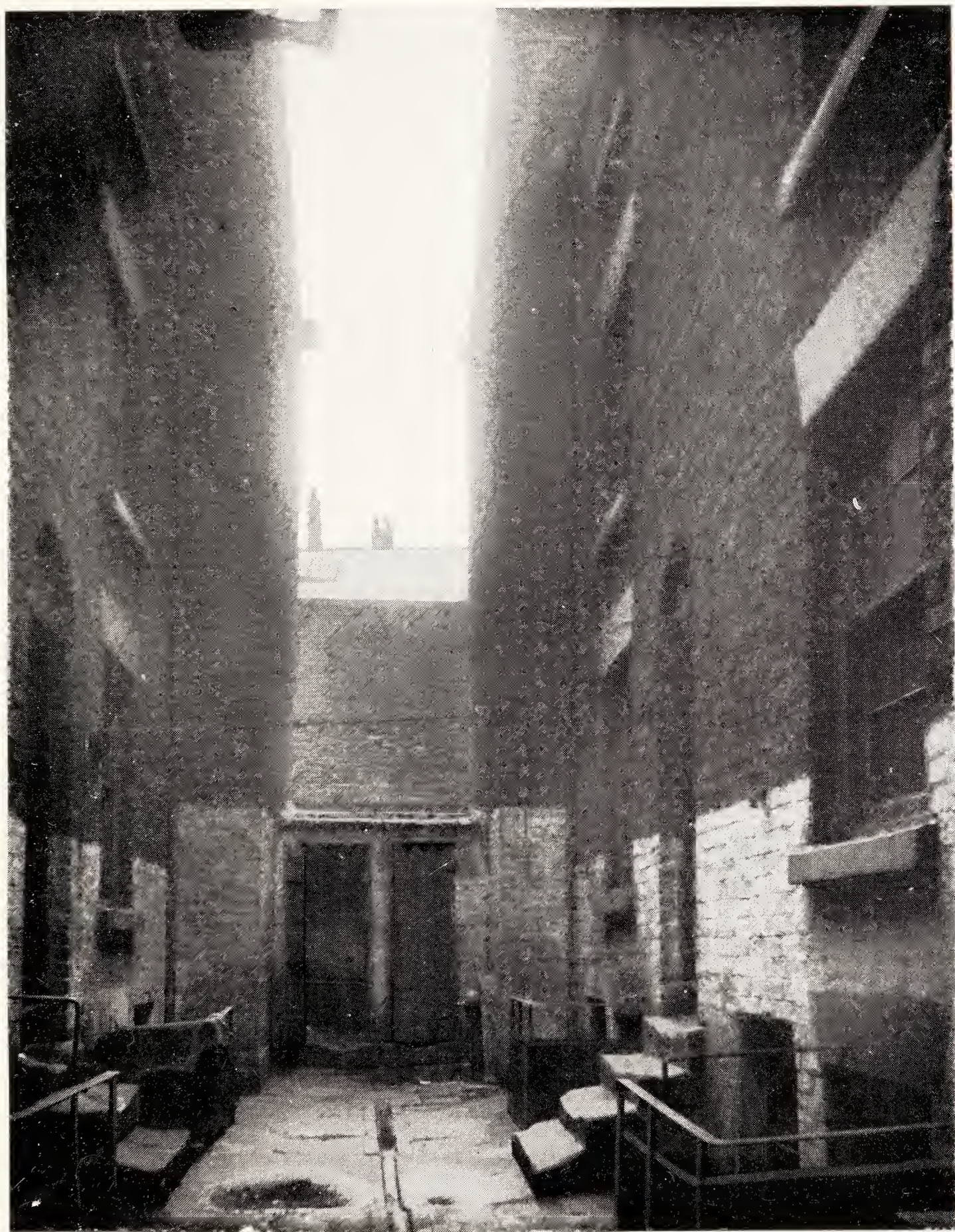
Work of the Year.

During the year, 1912, 646 dwelling-houses were included in the Official Representation in respect to six insanitary areas. Of these 646, 511 were the worst type of insanitary house, being arranged in courts, back to back and side to side with one another, and without through ventilation, yard space, or separate closet accommodation. Three other areas containing 109 houses, with a population of 231 persons have also been dealt with under Part 3 of the Housing of the Working Classes Act, 1890, namely, Gore Street, Sparling Street, and Jordan Street, and are referred to in the detailed report. In addition, 147 insanitary houses, scattered or in small groups, have been dealt with by Closing Orders, whilst 17 were demolished as the result of private improvements.

Unhealthy Areas.

The following are the unhealthy areas referred to:—Prince Edwin Street, Rathbone Street, Mason Street, Saltney Street, Blenheim Street, and Penrhyn Street. Each one of the six areas is similar in practically all respects with the properties which have been dealt with by the Corporation in the past, and the descriptions of which are fully given in previous reports; the photographs illustrate the property.

Included in these areas there are four licensed premises, namely, one in Penrhyn Street, one in Mason Street, and two in Saltney Street Area. The inclusion of these premises largely increases the cost of the schemes, but the advantages resulting from their demolition are very great.



NO. 5 COURT, RATHBONE STREET.



A special house to house inspection was made of the insanitary areas Census. in July, 1912, and a careful census taken, when the total population was found to be 2,468 persons.

The areas have been characterised by an unusual amount of sickness ^{Sickness and} and mortality, and, as might be expected, infant mortality is high. ^{Mortality.} The average death-rate in these six areas for the six years 1905-1910 varies from 33 to 44 per 1,000. The average annual death-rate for the City during the same period was 19·0 per 1,000.

The death-rate in the Corporation tenements occupied during the four years 1909 to 1912 was 27·9 per 1,000. The average death-rate from phthisis in the Corporation tenements during the four years 1909 to 1912 was 1·9 per 1,000, as compared with 4·0 per 1,000 in the old insanitary areas.

STATISTICS IN RESPECT TO AREAS NOW BEING
DEALT WITH.

	Prince Edwin Street	Rathbone Street	Mason Street	Saltney Street	Blenheim Street	Penrhyn Street
Area in square yards	10,301	10,660	5,872	2,176	2,195	4,410
Population—Census taken 17th July, 1912	737 persons	445 persons	301 persons	267 persons	230 persons	488 persons
Total Number of Dwelling Houses	187	128	107	60	48	116
Total Number of Insanitary Houses	163	115	85	52	45	113
Premises unoccupied on 17th July, 1912	64	44	38	3	2	11
Notices issued during 1912 for sanitary defects	94	66	29	37	63	54
Licensed Premises.....	—	—	1	2	—	1
Average annual death rate for the six years 1905-1910	38.78	42.31	44.40	35.53	33.09	37.56
Deaths under five years of age for the six years 1905 to 1910	91	49	33	26	44	59
Total deaths for the six years 1905-1910	192	115	77	58	103	110

CAUSES OF DEATH
DURING THE SIX YEARS 1905 TO 1910
(ALL AGES.)

Area.	Phthisis (included in Col. 2)	Tuberculosis (included in Cols. 3 and 4)	Zymotics	Respiratory	Digestive	Other causes	Total Deaths
Prince Edwin Street.....	21	14	32	74	16	70	192
Rathbone Street	10	10	19	45	15	36	115
Mason Street	5	7	12	18	11	36	77
Saltney Street	5	3	13	25	10	10	58
Blenheim Street	9	3	11	44	13	35	103
Penrhyn Street	10	7	20	42	18	30	110
Totals	60	45	107	248	83	217	655

The total deaths on the six areas for the six years 1905-1910 were 655.

In the 45 deaths from tuberculosis are included Marasmus, Tubercular Meningitis, and General Tuberculosis.

The Medical Officer of Health submitted the following observations in reference to these areas:—

“The whole of these areas, as the Official Representation indicates, present similar defects to those in previous reports with which the Committee have already dealt, and are familiar with.

“The Medical Officer feels constrained to refer to the question of the licensed premises upon these areas, and to urge that in no instance should these premises be excluded in dealing with the areas. The Medical Officer is fully aware that the cost of previous schemes has been greatly increased by the large amount of compensation paid for licensed premises, but at the same time the advantages to the district from the reduction of their numbers are so great that it would be a misfortune to depart from the previous practice. The Committee have



NO. 6 COURT, PRINCE EDWIN STREET.



never had occasion to regret the adoption of this course in areas conspicuous for their extreme squalor and poverty, and it is in these very areas in which such large sums of money are expended in these premises. Indeed, one firm, whose extensive ownership entitles their views to consideration, stated that a public house in such a situation 'is situated perhaps in the best neighbourhood for the public-house trade to be found in all Liverpool,' and occupies 'a particularly commanding position, and the people were of the right sort, from the publican's point of view, as customers.' Without in any way contesting this view, it appears that the best interests of the public health would be served by pursuing the course of removing these houses, notwithstanding the amount of money involved.

PRINCE EDWIN STREET AREA.

"In this area there are approximately 187 houses, of which 163 are the type of house which the Committee has, from time to time, dealt with.

"The area is situated in a congested district, and the site of the houses in Ebor Street, although small in extent, would provide a much-needed open space, to be used as a Recreation Ground.

"The total population is 825, and the average death-rate per thousand per annum for the six years 1905 to 1910, is 38·78.

RATHBONE STREET AREA.

"This area is situated on the East side of Rathbone Street, and a considerable portion of the property belongs to the Corporation, and part of it is now in possession.

"When taking into consideration the laying out of the site, it would be advisable to consider the question of a small recreation ground, which is much needed in this locality.

"There are at present 128 houses in this area, 115 of which are insanitary, leaving only 13 sanitary houses, which are also included in the scheme.

"The population is 453, and the average death-rate per thousand per annum for the six years 1905 to 1910 is 42·31.

MASON STREET AREA.

“ This is a small compact insanitary area situated in an elevated position, and containing 107 houses, 85 of which are insanitary.

“ The elevated site of this area makes it particularly suitable for re-housing. The fact that the site is surrounded by three streets furnishes an opportunity to improve the air space by increasing the width of the streets.

“ Within a reasonable distance of this area there are Wavertree Park and Kensington Gardens.

“ The population is 289, and the average death-rate per thousand per annum for the six years 1905 to 1910 is 44·40.

SALTNEY STREET AREA.

“ This area is an extension of the area upon which the Corporation have recently erected dwellings, and the treatment of the area will, no doubt, be a further extension on the lines of the existing new dwellings.

“ There are at present existing in this area seven courts, in which there are 39 houses, all of which were altered a few years ago, windows being inserted in the gable walls, thus providing cross ventilation to each house. The 13 front houses contiguous with the houses in the court were also dealt with in a similar manner.

“ Although the ventilation of the houses has been improved, the closet accommodation is still insufficient, and consists of trough closets, used in common, and the water supply is also from a stand pipe in the court. No provision is made in the way of separate yard space to any of the houses.

“ It is very desirable to include in this area two licensed premises, together with four other dwelling-houses in Great Howard Street, and two in Dublin Street.

“ The population is 272, and the average death-rate per thousand per annum for the six years 1905 to 1910 is 35·53.



NO. 9 COURT, PENRHYN STREET.

BLENHEIM STREET AREA.

“ There is a small compact area, half of which is now vacant land, having been purchased by the Housing Committee; the houses which formerly occupied the site have been dealt with by Closing Orders, many of these houses being empty and derelict at that time.

“ Immediately adjoining this area there is the St. Martin's Recreation Ground.

“ There are at present 48 houses in this area, only three of which can be considered sanitary.

“ The present population is 231, and the average death-rate per thousand per annum for the entire area, for the six years 1905 to 1910, is 33·09.

PENRHYN STREET AREA.

“ This is a small area situated on the North side of Penrhyn Street, containing 116 houses, 113 of which are insanitary.

“ The population is 488, and the death-rate per thousand per annum for the six years 1905 to 1910 is 37·56.

GORE STREET AREA.

“ On this area, situated on the East side of Gore Street, there are 76 houses, of which 64 are insanitary.

“ During recent months the Corporation has purchased the majority of the houses, and only 12 are now occupied, the present population being 78.

“ In 1908 the population on this area was 338, and the average death-rate per thousand per annum for the four years 1905 to 1908 was 26·6.

SPARLING STREET AREA.

“ This area is situated on the North-west side of Sparling Street, and contains 33 houses, 20 being insanitary.

“ The present population is 153, and the average death-rate per thousand per annum for the three years 1909 to 1911 is 43·5.

JORDAN STREET AREA.

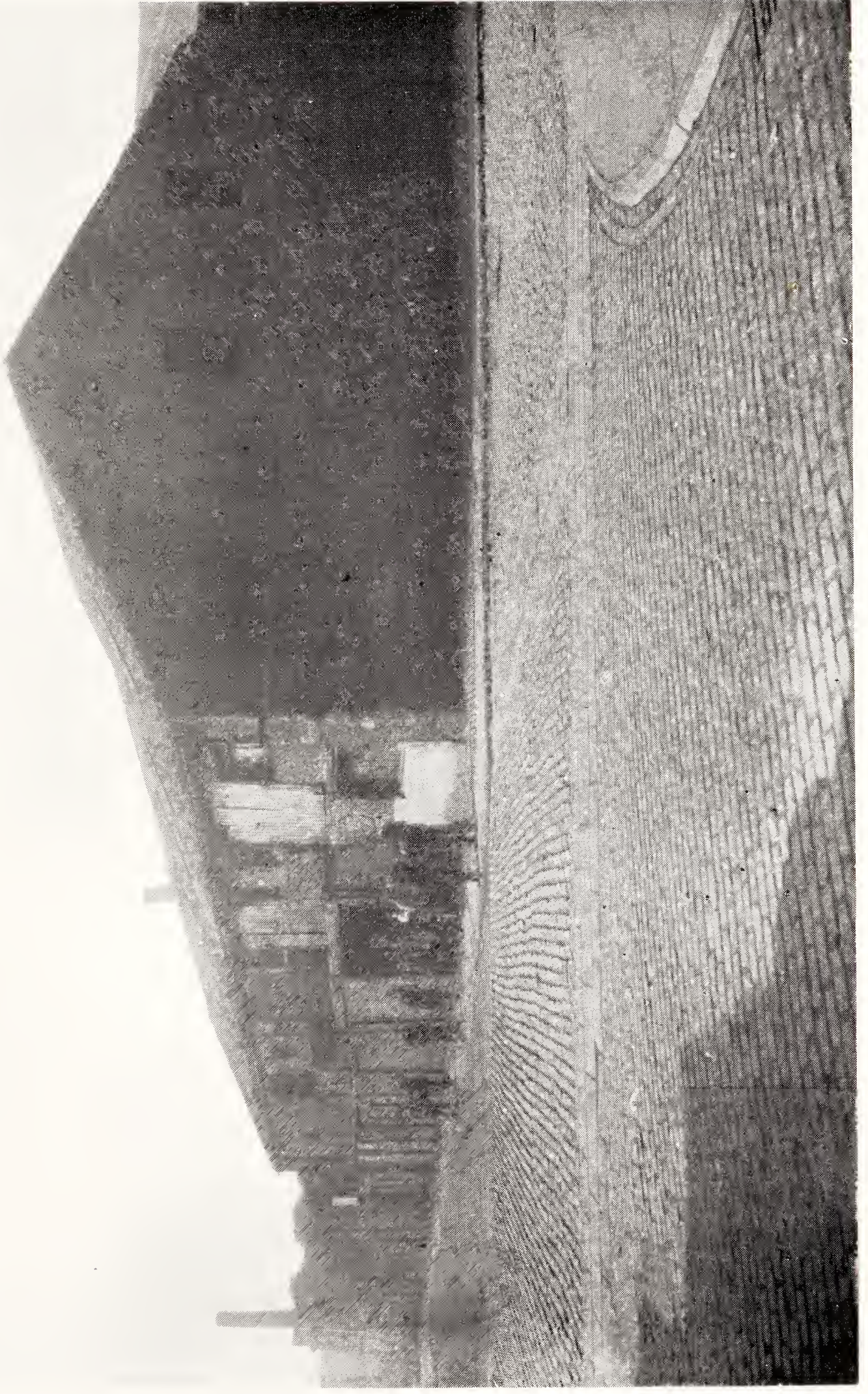
“ This area, situated on the North side of Jordan Street, contains no dwellings, the site being mainly occupied as workshops.”

The following is their official description:—

PRINCE EDWIN STREET AREA.

An area on the South side of Prince Edwin Street, beginning with and including the premises No. 18, Prince Edwin Street, thence running eastwardly to and including the premises No. 48, Prince Edwin Street, thence across Beresford Street to and including No. 50a, Prince Edwin Street, thence running eastwardly to and including No. 84, Prince Edwin Street, then turning and running southwardly along the easterly boundary of No. 84, Prince Edwin Street to Prince Edwin Lane, then turning and running in a westwardly direction in an irregular line along the north side of Prince Edwin Lane, to and including No. 24, Beresford Street, thence across Beresford Street to and including No. 23, Beresford Street, thence continuing in an irregular line in a westwardly direction along the north side of Back Beau Street to the rear of premises No. 16 in No. 2 Court, Prince Edwin Street, then turning and running in a northwardly direction to the premises No. 18, Prince Edwin Street aforesaid.

Also an area on the north side of Prince Edwin Street at the rear of the premises known as Brown's Buildings, Prince Edwin Street, beginning at a point at the north-west corner of Brown's Buildings in No. 3, Court, Ebor Street, at the rear of No. 6, Kermode Street, and running in a northwardly direction to the common passage at the rear of No. 28, China Street, then turning and running in an eastwardly direction along the south side of the said common passage to the eastwardly boundary of No. 5 Court, Ebor Street, then turning and running in a southwardly direction along the eastwardly boundary wall of the said No. 5 Court, Ebor Street, to Brown's Buildings, then turning and running in a westwardly direction along the rear wall of Brown's Buildings, across Ebor Street to the north-west corner of Brown's Buildings aforesaid.



VIEW OF JORDAN STREET AREA.—SHOWING DERELICT PREMISES IN JORDAN STREET.

RATHBONE STREET AREA.

An area on the east side of Rathbone Street, beginning with and including the premises No. 3, Rathbone Street, thence running southwardly to and including the premises No. 33, Rathbone Street, thence across Rathbone Place to and including premises No. 14, Rathbone Place, thence continuing in a southwardly direction to and including Nos. 55 and 57, Rathbone Street, thence across Mount View to and including No. 59, Rathbone Street, thence continuing in a southwardly direction to and including No. 77, Rathbone Street, thence turning in an eastwardly direction along Washington Street to the rear wall of No. 77, Rathbone Street, thence turning and running northwardly to the north side of the passage adjoining the premises No. 71, Rathbone Street, thence turning and running in an irregular line in an eastwardly direction along the north side of the passage on the south side of the Courts Nos. 2, 4, and 6 in Mount View to the rear boundary of the premises No. 3 in No. 6 Court, Mount View, thence running in a northwardly direction to and including No. 16, Mount View, thence across Mount View and running in a northwardly direction along the west side of Back Rathbone Street at the rear of property fronting St. James Road, thence running in a westwardly direction along the northerly side of the premises Nos. 3a and 3b, Back Rathbone Street, continuing across Back Rathbone Street to the south side of the premises No. 20, Upper Duke Street, thence running in a northwardly direction along the eastwardly boundary of the premises No. 20, Upper Duke Street, thence turning and running in a westwardly direction to and including the premises No. 18, Upper Duke Street, to the premises No. 3, Rathbone Street aforesaid.

MASON STREET AREA.

An area on the east side of Mason Street, beginning with and including the premises No. 27, Mason Street, and thence running in an irregular line in a southwardly direction to Shimmin Street, then turning and running in an eastwardly direction along Shimmin Street aforesaid, to and including the premises No. 52, Highgate Street, thence running in a northwardly direction along the west side of Highgate Street to and including the premises No. 26, Highgate Street, thence turning and running in a westwardly direction to the premises No. 27, Mason Street aforesaid.

SALTNEY STREET AREA.

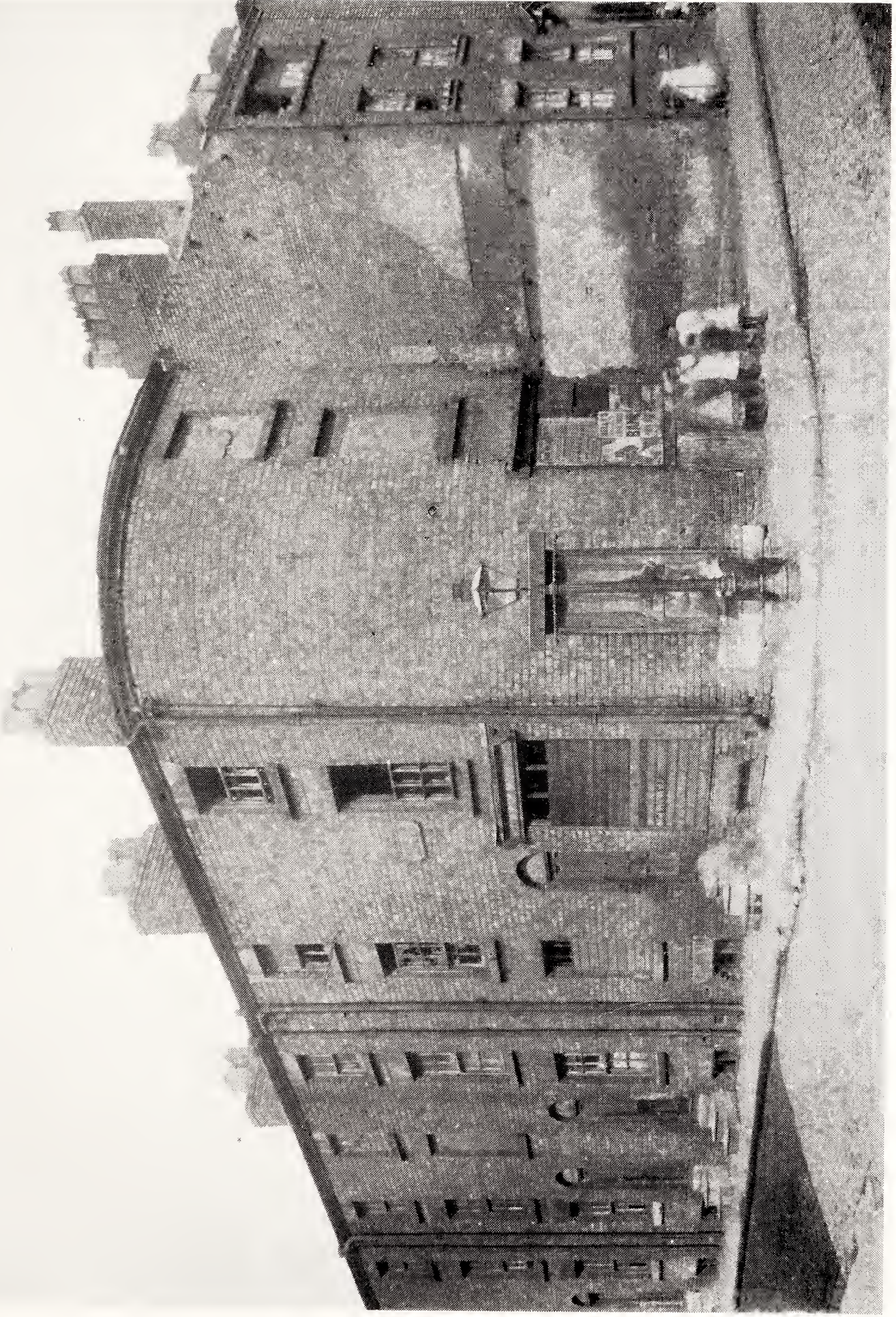
An area on the south side of Saltney Street, beginning with and including the premises No. 189, Great Howard Street, thence running westwardly along Saltney Street to and including the premises No. 13, Saltney Street, thence turning and running southwardly along the westerly boundary of No. 13, Saltney Street and Nos. 2, 4, and 6 in No. 7 Court, Saltney Street, for a distance of 62 feet, thence turning and running in an easterly direction to the rear of the premises No. 6, Dublin Street, thence turning and running southwardly along the westerly boundary of No. 6, Dublin Street, to Dublin Street, thence turning in an easterly direction along Dublin Street to and including the premises No. 179b, Great Howard Street, thence turning and running northwardly along Great Howard Street to the premises No. 189, Great Howard Street aforesaid.

BLENHEIM STREET AREA.

An area on the south side of Silvester Street, beginning with and including the premises No. 2, Silvester Street, thence running in an easterly direction to and including the premises No. 28, Silvester Street, thence turning and running in a southerly direction along the east side of No. 28, Silvester Street, and the fronts of the houses Nos. 1, 2, 3 and 4 in No. 8 Court, Silvester Street, thence across Back Blenheim Street, and thence running in a westwardly direction on the south side of Back Blenheim Street to Saint Augustine Street, thence turning and running in a northwardly direction across Back Blenheim Street along the front of Nos. 5, 6, 6a, 7, 7a, 8 and 9, Saint Augustine Street aforesaid, to No. 2, Silvester Street aforesaid.

PENRHYN STREET AREA.

An area on the east side of Scotland Road and north side of Penrhyn Street, beginning with and including the premises No. 330, Scotland Road, thence running in an eastwardly direction to and including No. 29, Penrhyn Street, thence across Oswald Street to and including No. 31, Penrhyn Street, thence running in an eastwardly direction to and including No. 49, Penrhyn Street, thence turning and running in a northwardly direction along the east wall of No. 49, Penrhyn Street, and the rear wall of Nos. 2, 4, 6 and 8, in No. 21 Court, Penrhyn



SPARLING STREET AREA.—SHOWING DERELICT PREMISES IN SHAW'S
ALLEY AND SPARLING STREET.

Street, thence turning and running in a westwardly direction to and including No. 74, Oswald Street, thence across Oswald Street to and including No. 73, Oswald Street, thence continuing in a westwardly direction to and including No. 336, Scotland Road, thence turning and running in a southwardly direction to the premises No. 330, Scotland Road aforesaid.

The Corporation Surveyor stated that the total cost of acquiring the areas proposed to be dealt with under Part 1 of the Act will amount to approximately £80,113, and the buildings proposed to be erected on the sites may be taken at £77,920.

The total cost of acquiring the areas proposed to be dealt with under Part 3 of the Act will amount to approximately £18,004, and the buildings proposed to be erected on the sites may be taken at £31,840.

The accompanying schedule gives in a condensed form a statement of the whole of the work.

Part 1 of the 1890 Act:—

Scheme.	Area sq. yards.	No. of persons dispossessed.	No. of persons to be provided for
Prince Edwin Street	9,436	... 825	... 640
Rathbone Street	9,113	... 453	... 492
Mason Street	5,872	... 289	... 288
Saltney Street	2,176	... 272	... 204
Blenheim Street (part of)....	2,195	... 231	... 168
Penrhyn Street	4,155	... 488	... 156
	<hr/> 32,947 <hr/>	... <hr/> 2,558 <hr/>	... <hr/> 1,948 <hr/>

Part 3 of the 1890 Act:—

Scheme.	Area sq. yards.	No. of persons dispossessed.	No. of persons to be provided for
Gore Street	2,422	... 78	... 240
Sparling Street	2,345	... 153	... 136
Jordan Street	3,663	... —	... 252
Blenheim Street	1,805	... —	... 168
	<hr/> 10,235 <hr/>	... <hr/> 231 <hr/>	... <hr/> 796 <hr/>

HOUSING OF THE WORKING CLASSES ACTS, 1890-1909.

Pursuant to the Resolution of the Housing Committee of the 11th October, 1907, asking for a periodical return of the progress of the work of the Housing Committee, the Medical Officer submitted the following report for the year 1912:—

Table 1.

			Courts.	Court houses.		Approx. No. of front houses.
Approximate number of insani- tary houses existing on 1st January, 1912.			458	2572		1049
Proceedings authorised by the City Council during the year 1912, in regard to houses not previously referred to ...	Courts.	Court houses.	3		Front houses.	
“ A ” By Closing Orders ...	31	141			6	
“ B ” By schemes under the Housing of the Working Classes Acts, (Parts 1 and 3.)	55	437			81	
“ C ” Alterations and improve- ments authorised on circular letter, or on the action of the Health Committee in asking for more closet accommoda- tion	—	—			—	
“ D ” Dealt with by owners for private improvements ...	6	17			—	
Total No. dealt with during 1912	92	595			87	
Leaving for future consideration			366	1977		962

Of the above 595 Court houses and 87 Front houses dealt with in the year 1912, 79 have been demolished, 1 rendered sanitary, 228 closed, and 374 are occupied.

Thirty-five houses, not included in return of Courts have also been dealt with, nineteen have been demolished, and sixteen are closed

Table 2.

Statement showing the number of houses dealt with during the year 1911, and indicating the action taken:—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1911.	No. of Houses.	Demo-lished.	Ren-dered Sanitary.	Closed.	Occupied
" A " By Closing Orders	30	6	24	—	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation.	—	—	—	—	—
" D " Dealt with by owners for private improvements.....	1	1	—	—	—
Total	31	7	24	—	—

COURT HOUSES.

How Dealt With.	Total No. of Houses dealt with.	Demo-lished.	Ren-dered Sanitary.	Closed.	Occupied
" A " By Closing Orders	157	123	23	11	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	—	—	—	—	—
" D " Dealt with by owners for private improvements.....	5	5	—	—	—
Total No. dealt with during 1911	162	128	23	11	—

Table 3.

Statement showing the number of houses dealt with during the year 1910, and indicating the action taken;—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1910.	No. of Houses	Demo-lished.	Ren-dered Sanitary	Closed.	Occupied
" A " By Closing Orders	15	3	—	11	1
" B " By Schemes	—	—	—	—	—
" C " Alterations and Improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation.....	10	10	—	—	—
" D " Dealt with by owners for private improvements.....	8	8	—	—	—
Total	33	21	—	11	1

COURT HOUSES.

How Dealt With.	Total No. of Houses dealt with.	Demo-lished.	Ren-dered Sanitary	Closed.	Occupied
" A " By Closing Orders	216	137	45	34	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation.....	42	25	17	—	—
" D " Dealt with by owners for private improvements.....	45	38	7	—	—
Total No. dealt with during 1910	303	200	69	34	—

TABLE 4.

Statement showing the number of houses dealt with during the year 1909, and indicating the action taken:—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1909.	No. of Houses.	Demo-lished.	Ren-dered Sanitary.	Closed.	Occupied
" A " By Closing Orders	6	3	3	—	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	16	2	14		—
" D " Dealt with by owners for private improvements	6	6	—	—	—
Total	28	11	17	—	—

COURT HOUSES.

How Dealt With.	Total No. of Houses dealt with.	Demo-lished.	Ren-dered Sanitary.	Closed.	Occupied
" A " By Closing Orders	206	159	40	7	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	51	30	21	—	—
" D " Dealt with by owners for private improvements	95	95	—		—
Total No. dealt with during 1909	352	284	61	7	—

Table 5.

Statement showing the number of houses dealt with during the year 1908, and indicating the action taken:—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1908.	No. of Houses.	Demo-lished.	Ren-dered Sanitary.	Closed.	Occupied.
" A " By Closing Orders	3	2	1	—	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter or on the action of the Health Committee in asking for more closet accommodation	32	4	28	—	—
" D " Dealt with by owners for private improvements	11	11	—	—	—
Total.....	46	17	29	—	—

COURT HOUSES.

How Dealt With.	Total No. of Houses dealt with.	Demo-lished.	Ren-dered Sanitary.	Closed.	Occupied.
" A " By Closing Orders	104	71	25	8	—
" B " By Schemes	—	—	—	—	—
" C " Alterations and improvements authorised on circular letter, or on the action of the Health Committee in asking for more closet accommodation	117	42	75	—	—
" D " Dealt with by owners for private improvements	53	53	—	—	—
Total No. dealt with during 1908	274	166	100	8	—

Table 6.

Statement showing the number of houses dealt with during the year 1907, and indicating the action taken:—

FRONT HOUSES.

Total No. of Front Houses dealt with during the year 1907.	No. of Houses.	Demo-lished.	Ren-dered Sanitary	In Schemes but still occupied	Closed
" A " By Closing Orders	23	21	2	—	—
" B " By Schemes	14	14	—	—	—
" C " Cases in which summonses have been issued, but for which Closing Orders were not obtained up to 31st December, 1907.	21	—	21	—	—
" D " Alterations and improvements authorised on circular letter or on action of Health Committee in asking for more closet accommodation.	55	14	41	—	—
Total	113	49	64	—	—

COURT HOUSES.

How Dealt With,	Total No. of Houses Dealt with.	Demo-lished.	Ren-dered Sanitary	In Schemes but still occupied	Closed.
" A " By Closing Orders	111	80	16	—	15
" B " By Schemes	54	54	—	—	—
" C " Cases in which summonses have been issued, but for which Closing Orders were not obtained up to 31st December, 1907.	67	29	38	—	—
" D " Alterations and improvements authorised on circular letter, or on action of Health Committee in asking for more closet accommodation.	60	26	34	—	—
Total	292	189	88	—	15
Less Houses included in Schemes, but also dealt with by Closing Orders.	5	—	—	—	5
Total No. of Court Houses dealt with during year 1907.	287	189	88	—	10

Table 7.

Statement showing the number of houses dealt with during the year 1906, and indicating the action taken:—

FRONT HOUSES.

Total No. of front houses dealt with during year 1906.	No. of Houses.	Demo-lished.	Ren-dered Sanitary.	In Schemes but still Occupied.	Closed.
" A " Closing Orders.....	19	18	1	—	—
" B " By Schemes.....	102	89	—	—	13
" C " By Circular letter	72	13	59	—	—
Total	193	120	60	—	13

COURT HOUSES.

How Dealt With.	Total No of Houses dealt with.	Demo-lished.	Ren-dered Sanitary.	In Schemes but still Occupied.	Closed.
" A " Closing Orders	329	293	30	—	6
" B " By Schemes.....	517	383	—	—	134
" C " By Circular letter	170	99	71	—	—
Total.....	1,016	775	101	—	140
Less houses dealt with by Closing Orders, and included in Schemes ...	50	44	—	—	6
Total No. of Court Houses dealt with during the year 1906	966	731	101	—	134

Table 8.

SUMMARY.

Showing the total number of houses dealt with during the years 1906, 1907, 1908, 1909, 1910, 1911, and 1912.

FRONT HOUSES.

Year.	Total No. of Houses dealt with.	Demo- lished.	Ren- dered Sanitary.	In Schemes but still Occupied.	Closed.	Occu- pied.
1906	193	120	60	—	13	—
1907	113	49	64	—	—	—
1908	46	17	29	—	—	—
1909	28	11	17	—	—	—
1910	33	21	—	—	11	1
1911	31	7	24	—	—	—
1912	87	3	—	—	26	58
Total	531	228	194	—	50	59

COURT HOUSES.

Year.	Total No. of Houses dealt with.	Demo- lished.	Ren- dered Sanitary.	In Schemes but still Occupied.	Closed.	Occu- pied.
1906	966	731	101	—	134	—
1907	287	189	88	—	10	—
1908	274	166	100	—	8	—
1909	352	284	61	—	7	—
1910	303	200	69	—	34	—
1911	162	128	23	—	11	—
1912	595	76	1	316	202	—
Total	2,939	1,774	443	316	406	—

The nett result shows that during the seven years 1906, 1907, 1908, 1909, 1910, 1911, and 1912, 2,002 insanitary dwellings have been demolished, 456 have been closed and await demolition or reconstruction, and 637 have been reconstructed and rendered sanitary, making a total for the seven years of 3,095 (excluding those in schemes but still occupied), dealt with as follows:—

1906	1159
1907	400
1908	320
1909	380
1910	335
1911	193
1912	308

Total 3095

There are approximately 2,900 houses of what are known as the "back to back" type still left for future consideration, but besides these there are, in different parts of the City, houses which do not at present meet all health requirements in respect to through ventilation and size of yard space, &c., and it was in respect to this class of house that a clause was proposed for insertion in the present Corporation Bill to facilitate re-construction by seeking power to render financial assistance to owners on the same principle as compensation is now paid under the Liverpool Act, 1864, for the Improvement and Demolition of Insanitary Property.

RE-HOUSING.

The number of dwellings provided by the Corporation up to the present is 2,727, and their situations and dates of opening are as follows; a considerable sum has recently been spent in modernising St. Martin's Cottages:—

Situation.	Date Opened.	Total Number of Tenements.
St. Martin's Cottages	1869	124
Victoria Square	1885	270
Juvenal Dwellings	1891	101
Arley Street	{ 1897 } { (1902/3) }	46
Gildart's Gardens	{ 1897 } { 1904 }	229
Dryden Street	1901	182
Kempston Street	1902	79
Kew Street.....	1902	114
Adlington Street Area	1902/3	272
Hornby Street Area	{ 1904 } { 1906/7 }	449
Eldon Street	1905	12
Stanhope Cottages	1904	60
Mill Street	1904	55
Clive Street and Shelley Street	1905	84
Upper Mann Street	1905/6	88
Combermere Street	1909	49
Burlington Street	1910	114
Saltney Street	1911	48
Grafton Street	1911	60
Bevington Street	1912	223
Northumberland Street.....	About to be opened.	68
Grand Total		2,727

The population of the above dwellings is 10,099. At the time the census was taken, 177 tenements were unoccupied.



NEW DWELLINGS.

FRONT VIEW—NORTHUMBERLAND STREET.

DESCRIPTION OF TENEMENTS.

Number of 1 roomed dwellings	...	...	...	193
„ „ 2 „ „	...	...	...	1,257
„ „ 3 „ „	...	...	...	991
„ „ 4 „ „	...	...	...	286
(61 of which are self-contained)				—
				2,727
				—

RENTALS.

The rentals of the tenements vary from 1s. 9d. to 5s. 6d., and those of the self-contained cottages range from 6s. to 7s.

RESTRICTED DWELLINGS.

2,171 of these dwellings are reserved for persons who have been dispossessed, and before an application is granted the Housing Committee is satisfied that the applicant formerly resided in an insanitary house or insanitary cellar, or was dispossessed from an overcrowded sub-let house. All applications are referred in the first instance to the Medical Officer of Health for report, and careful investigation is made to verify the claims of the applicant.

The total number of applications investigated during the year 1912 was 752, and particulars concerning them are not without interest, as showing an appreciation of the advantages offered by the Corporation dwellings.

It was found that in 496 instances the circumstances of the applicant did not comply with the Committee's conditions. Of this number 115 applicants gave false addresses, and in 381 cases there was no evidence that the alleged overcrowding or illegal occupation existed. Of the remaining 256 cases investigated, 40 were found to be cases of one family overcrowding a house or cellar, or occupying an insanitary house, or illegal occupation of a cellar. These were dealt with under the Public Health Act and the Housing of the Working Classes Act. 194 were claims on account of alleged overcrowding in sub-let houses, of which, in 129 cases, it was found that there was no overcrowding, or the alleged

overcrowding was easily remedied by some of the occupants leaving the premises, or by re-arranging the sleeping apartments. There were 65 cases of overcrowding found in sub-let houses, and in 38 of these instances informations were laid against the chief tenants, and convictions followed.

The total number of cases of overcrowding in ordinary dwellings, cellars, and sub-let houses, and illegal occupation of cellars, was 256 arising out of 752 applications investigated, and in 123 instances the applicants were allowed to rent a Corporation dwelling.

In a considerable number of cases the overcrowding was of a very recent date, and the offence had evidently been committed with the intention of qualifying for a Corporation house. For instance, in 23 cases the length of the tenancy ranged from one week to three weeks before the application was made.

The total number of day visits paid during the year was 801, and 80 night visits were made, the total for the year being 881, from which it will be seen that a considerable amount of the Inspector's time was taken up by investigating these applications.

During the year the Manager of the Dwellings referred 41 Corporation tenements to the Medical Officer's Department for night visitation, as against 55 referred during the year 1911.

Night visits were paid to these tenements, with the result that 6 tenements were found to be sub-let, of which number, 3 were also found overcrowded. There were also 9 tenements found overcrowded, but not sub-let, i.e., occupied by one family and their relations (or friends in some instances), and 4 cases of indecent occupation of sleeping rooms, viz., in one case two men and two women were found in the same bedroom, in one case three women and one man, in one case one man and two women, and in one case two men and one woman.

During the year, 19 cases of improper or irregular occupation were found in 15 Corporation tenements out of 41 visited, compared with 35 cases in 30 tenements out of 55 the preceding year.

As further evidence of the desire to obtain a Corporation dwelling, and as showing the necessity for investigating the applicants' claims, it is interesting to note that out of 3,471 applications dealt with during the past five years, in 2,494 instances the circumstances of the applicants did not comply with the Committee's conditions.

It must not be forgotten that many of the tenants of the Corporation dwellings have hitherto been accustomed all their lives to insanitary surroundings and insanitary habits, and have always relied upon the friendly services of the Sanitary Inspectors. To their new surroundings many of them carry their old customs, and the evidence is overwhelming that if the occupiers of the new dwellings are to maintain the necessary standard of personal and domestic sanitation, the caretakers appointed to supervise the dwellings must themselves be persons trained to understand and to appreciate the elements of hygiene, and so be able to influence the poorer class of tenants in the right direction. This matter has a very serious bearing upon the future of these dwellings; obviously if the official caretaker himself is ignorant of the objects of sanitation and sets the example of overcrowding or condones other conditions prejudicial to health, his influence for good is nil.

GROWTH OF THE SUBURBS.

During the past five years the Building Surveyor reports that 6,528 houses, under £25 rental, have been erected in the suburbs.

Recently, in the course of inspection of houses let at a rental not exceeding £18 per annum, in the suburban areas, viz., Walton, Old Swan, and Wavertree, the Medical Officer caused enquiries to be made of the occupiers of 400 houses, erected during the past three years, and it was found that 187 families (consisting of 561 persons) had removed from dwelling-houses in the older and more congested parts of the City, no doubt attracted by the more open localities and superior domestic arrangements of the houses. In 61 instances the occupiers were newly married couples, commencing housekeeping; the tenants of 30 houses came from districts without the City Area, and a few were from the Cheshire side.

Similar enquiries were made in 1907, and gave like results.

UNOCCUPIED HOUSES.

From the Head Constable's Return of Unoccupied Houses, made at the end of the year, it appears that there were in the City 1,230 vacant houses under a rental of 5s. per week.

The detailed returns have been carefully examined, and it was found that of this number 262 are insanitary, leaving 968 available sanitary houses under a rental of 5s. a week, most of them being situated in the old City Area.

REMOVAL FROM INSANITARY HOUSES.

Careful enquiries have been made by Officers of the Public Health Department to ascertain the present addresses of tenants who formerly occupied insanitary houses dealt with by Closing Orders, or purchased by the Housing Committee, during the year 1912.

It was found that of 161 families (approximately 650 persons) 85 removed to Corporation dwellings, 68 to other sanitary houses, and in only 8 instances the tenants removed to adjoining insanitary unoccupied houses. If a Closing Order had been obtained in respect to these unoccupied insanitary houses, it is more than probable that the tenants would have followed the example of their neighbours, and applied for Corporation dwellings. Six of these insanitary houses are, however, now included in schemes, and in the course of time will be demolished.

The principle of prohibiting the re-occupation of dwellings unfit for human habitation when once they are unoccupied has been repeatedly urged by the Medical Officer, and it has been recognised in a recent resolution of the Health Committee in respect to cellars. The Housing Committee, however, have not until recently favoured the principle, and only in an exceedingly limited degree, mainly owing to the detrimental effect that the closing of a single house might have on adjoining property, and, in some instances, it would appear that when a single house is dealt with, the tenants of the neighbouring houses cease to regularly pay their rent, and a still further deterioration results from the action of roughs in damaging the property. Yet it is anomalous that the re-occupation of dwellings unfit for human habitation, and admittedly dangerous and injurious to health, should be tolerated.

From an analysis of the return furnished by the Manager of the Corporation Dwellings, it appears that of the total number of persons formerly residing in the insanitary property on the Bevington Street Area, nearly 94 per cent. have been re-housed in Corporation Dwellings, and in the case of the tenants of the insanitary property on the Northumberland Street Area, over 79 per cent. have been similarly re-housed.

SUB-LETTINGS AND THE OCCUPATION OF CELLARS.

The following table shows the number of sub-let houses on the Sub-let Register; the number of night visits for the detection of overcrowding and the percentage of convictions to the number of visits, during the past 12 years, i.e., since the application of bye-laws which required a relatively large addition to the cubic space allowed for each lodger. The figures are a sufficient answer to the suggestion that the removal of slum areas has resulted in an increase of sub-letting and overcrowding:—

Year.	No. of Sublet Houses.	No. of night visits for detection of overcrowding.	No. of convictions for overcrowding.	Per centage of convictions to number of visits.
1901	18,917	17,863	1,351	7.56
*1902	19,976	17,274	1,150	6.65
1903	21,719	18,439	1,264	*6.85
1904	22,488	17,886	1,148	6.41
1905	20,518	19,193	1,326	6.90
1906	19,714	18,838	920	4.88
1907	19,832	22,982	962	4.18
1908	19,776	23,074	738	3.19
1909	19,654	23,534	576	2.44
1910	19,436	23,273	414	1.77
1911	18,873	21,788	526	2.41
1912	16,475	22,173	612	2.76

* This includes the added area of Garston.

CELLARS.

Under the provisions of the Liverpool Corporation (General Powers) Act, 1908, the occupation of cellars, as separate dwellings, the floors of which are more than 2 feet below the ground, must cease after 31st December, 1912, and already many tenants of cellars are being received into the Corporation dwellings. The number of cellars occupied as separate dwellings has steadily declined during recent years, and during the last ten years the number of cellars and the population housed therein has been reduced by nearly one-half.

It will be seen from the table on page 94 that about 1,600 cellars were separately occupied during the year 1912, containing an approximate population of 5,000 persons. The removal of these persons from these dark, badly-ventilated habitations will certainly result in much benefit to their health.

All the cellars referred to in the return for 1912 are connected with houses which do not themselves come within the category of "insanitary."

The chief occupations of the inhabitants of these cellars are:—Dock and Casual Labourers, Marine Firemen, Carters, and Charwomen, and as the result of careful enquiries it appears that their average earnings do not exceed 15s. per week, and the average rental of each cellar dwelling is approximately 2s. 9d. per week.

The situation of the cellar dwellings is as follows:—

District.							No. of Cellar Dwellings.
Scotland	...	...	...	...	...	...	552
Exchange	...	...	...	...	...	...	47
Abercromby	...	...	...	...	...	...	56
Everton	...	...	...	...	...	...	503
Kirkdale	...	...	...	...	...	...	105
West Derby (West)	...	...	...	...	...	...	83
Toxteth	...	...	...	...	...	...	268

EFFECT OF HOUSING.

The Vital Statistics in connection with the Corporation tenements for the year 1912 are as follows:—Population, 8,885; Births, 476; Deaths, 274; Birth-rate, 53·5; Death-rate, 30·8; Infantile Mortality, 85 deaths under one year, or 178·5 per 1,000 births; Phthisis rate, 2·3 per 1,000.

Vital Statistics for the four years 1909 to 1912, inclusive, based on a population of 8,903 (Census taken May, 1912):—Births, 1,714; average Birth-rate, 48·1; Deaths, 997; average Death-rate, 27·9; Infantile Mortality, 335 deaths under one year, or 195·4 per 1,000 births; Phthisis Death-rate, 1·9 per 1,000.

There is undoubtedly a marked improvement in the habits of the majority of those who occupy Corporation tenements, as indicated by the external and internal appearance of the dwellings.

To fully appreciate the marked change one must be conversant with the original insanitary conditions under which these people lived. The improvement is particularly noticeable amongst the children, and is so marked that one can hardly realise that they are the same children who formerly lived and played in the insanitary courts.

At night the districts are quiet and orderly, and the well-lighted rooms present a cheerful appearance. The extra police supervision formerly necessary in many of the streets in which the dwellings are situated is not now required.

The recent improvement which the Housing Committee have made in the substitution of incandescent light for the ordinary Bray burner in the staircase of the newly erected dwellings is very marked, and if universally adopted would be a distinct advantage.

Quite apart from the improved health conditions of those immediately concerned, an effect of the removal of insanitary property is that the time of the Officers of the Public Health Department, formerly absorbed in ineffectual efforts to mitigate slum conditions, may now be concentrated on other important work in different parts of the City. Formerly it was necessary for these Officers to pay daily visits and re-visits to the insanitary courts to secure the removal of nuisances which constantly called for attention.

The time of the Lodging-house Inspector is also similarly economised, as it was in these courts that overcrowding was so prevalent.

By the removal of these insanitary courts the cost of cleansing and washing and scavenging has been obviated, and from a very careful calculation it is estimated that at the present time there is a saving of £2,200 per annum in respect to cleansing, and £900 per annum for the sanitary administration. In the year 1895 there were 1,510 courts; these were reduced in 1905 to 826, and in 1913 to 409.

Cost.

The total cost of demolition and housing up to the 31st December, 1912, is considered to be £1,135,041, equal to a rate of $2\frac{1}{2}$ d. in the £.

COMPENSATION.

During the years 1908 to 1913, 352 houses, other than those included in schemes, were demolished, and £3,445 was paid as compensation, equal to £9 15s. 9d. for each house demolished, and as a consequence the owner cannot build on the site without the consent of the Corporation.

In previous Reports the Medical Officer of Health has referred to the need for suitably trained persons being selected for the position of care-takers. Continued observations confirm this necessity.

Whilst taking a census of the population the Inspectors found that 122 of the tenements were sub-let; in 571 cases the dwellings were not ventilated, owing to the window of the living room being closed; and furtive sub-letting, neglect of ventilation, floors dirty, damaged sink traps, dirty walls and ceilings, dirty water-closets, yards used for the keeping of fowls and storage of lumber, the defective sink waste pipes and defective closets are possibly relatively minor matters, but they should be avoided.

From time to time the Medical Officer has received requests to allow the Lodging-house Inspectors to visit the Corporation tenements for the purpose of ascertaining if overcrowding or sub-letting exists. During the past four years 223 tenements have been visited at night, with the result that in 115 cases the tenements were found occupied contrary to the Committee's Regulations; in some instances rooms were grossly overcrowded, or even indecently occupied. Many of these infringements would have been avoided had the inmates been differently distributed in the sleeping rooms, a condition quite easily complied with.

The Building Surveyor has kindly furnished the following Return of Houses erected in the City :—
RETURN OF HOUSES ERECTED 1896-1912.

	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Under £12 ...	...	7	95	63	4	...	222	85	201	258	78	243	115	149	...	132	...
£12 to £18 ...	...	...	...	...	821	436	558	590	363	284	394	547	609	283	119	151	41
}																	
£18 to £25 ...	...	944	1,138	1,276	...	...	...	...	...	...	...	...	...	...	...	...	...
£25 to £35 ...	...	...	...	...	769	602	633	962	1,058	1,067	872	1,039	1,022	1,369	1,279	768	717
£35 and upwards ...	...	204	389	539	607	402	441	323	706	449	638	422	444	191	168	109	64
	44	34	99	157	133	109	101	125	116	204	202	152	135	157	144	74	56
	1,199	1,656	1,977	2,358	1,573	1,963	2,061	2,453	2,174	2,186	2,453	2,342	1,850	2,149	1,710	1,234	878

HOUSING, TOWN PLANNING, &c., ACT, 1909.

Return made to the Local Government Board, in pursuance of Sec. 18 of the Housing, Town Planning, &c., Act, 1909, in respect of the year ended 31st March, 1913.

BUILDINGS UNFIT FOR HUMAN HABITATION.

Number of dwellings in respect of which representations were made to the Local Authority during the year:—

(a) By the Medical Officer of Health 199

Number of dwelling houses in respect of which closing orders were made during the year 189

Number of dwelling houses ordered to be demolished by the Local Authority during the year (Sec. 18) 152

LIVERPOOL SANITARY AMENDMENT ACT, 1864.

Under the provisions of the above Act, the Medical Officer of Health certified that the following premises were unfit for human habitation, and ought to be demolished:—

The court known as No. 34 court in BURLINGTON STREET in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 in the said No. 34 court.

The dwelling-houses numbered 136 and 138 in BURLINGTON STREET aforesaid, contiguous to No. 34 court in the said street.

The court known as No. 36 court in BURLINGTON STREET aforesaid.

The dwelling-houses numbered 1, 2, 3, 4 and 5 in the said No. 36 court.

The dwelling-house numbered 140 in BURLINGTON STREET aforesaid, contiguous to No. 36 court in the said Street.

The court known as No. 16 court in JOHNSON STREET in the City of Liverpool.

The dwelling-house numbered 1 in the said No. 16 court.

The court known as No. 22 court in JOHNSON STREET aforesaid.

The dwelling-houses numbered 1 and 2 in the said No. 22 court.

The court known as No. 1 court in RICHMOND ROW, in the City of Liverpool.

The dwelling-houses numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in the said No. 1 court.

The dwelling-houses numbered 7 and 9 in GORE STREET, in the City of Liverpool.

The dwelling-houses numbered 7, 8 and 9 in No. 1 court, BACK CHESTER STREET, in the City of Liverpool.

CITY HOSPITALS.

HOSPITAL ACCOMMODATION.

The number of beds in commission at the Parkhill Hospital has been varied from time to time during the last few years to meet the needs of the City. They were reduced in April of 1910 from 235 to 120, but owing to the increased prevalence of Measles in the autumn of that year it became necessary to increase the accommodation to 180 beds. In January, 1911, the number of beds in use was again reduced to 150 and subsequently to 120.

At 31st December, 1912, the number of beds available in the various hospitals was as follows:—

City Hospital North	...	..	...	151 beds.
„ South	...	...	...	80 „
„ East	...	...	...	152 „
„ Parkhill	...	...	...	270 „
„ Fazakerley	...	...	...	350 „
„ Fazakerley Annexe	...	...	...	167 „
				<hr style="width: 10%; margin: 0 auto;"/> 1,170 „ <hr style="width: 10%; margin: 0 auto;"/>

The approximate apportionment of beds is as follows, but the arrangement is modified as circumstances necessitate:—

Smallpox	...	...	...	...	160 beds.
Typhus Fever	...	...	...	...	10 „
Typhoid Fever	...	...	...	...	50 „
Scarlet Fever	...	...	...	...	500 „
Diphtheria	...	...	...	...	90 „
Measles	...	...	...	...	60 „
Tuberculosis	...	...	...	...	200 „
Isolation	...	...	...	...	100 „
					<hr style="width: 10%; margin: 0 auto;"/> 1,170 „ <hr style="width: 10%; margin: 0 auto;"/>

The average duration of stay in hospital of patients whose treatment was completed during the year 1912 was as follows:—

Scarlet Fever Patients	...	...	...	7 to 8 weeks.
Typhoid	...	...	...	7 ,,
Diphtheria	...	...	...	4 to 4½ ,,
Measles	...	...	...	4 ,,

In many instances detention in hospital is very prolonged owing to the severity of the original illness, and the consequent slow convalescence of the patient.

The value of the hospitals, and the immense amount of useful work performed is shown by the fact that no less than 5,257 patients were treated within their walls during the year.

It would be difficult to point to any example of necessary municipal expenditure in which the direct benefits, alike to the recipients and to the community, are more strongly marked.

Arrangements have been made between the Hospitals Committee and various Local Authorities to receive cases of infectious disease from districts beyond the city boundary, namely, Sefton Rural District, Waterloo and Seaforth, Great Crosby, Little Crosby, Allerton, Childwall, and the Children's Convalescent Home, West Kirby.

Arrangements have also been made to deal with any case of cholera, yellow fever, or plague which may arise in any of the neighbouring urban or rural districts. A suitable charge is made in each case.

With regard to the facilities offered by the Hospitals for the Training of Nurses, probationers are received at some, but not all, of the city hospitals, and under the arrangements now made for their training the course of instruction is a very full and complete one.

TUBERCULOSIS.

A scheme was adopted by the Council in September, 1907, by which 24 beds at the City Hospital, Fazakerley, were to be devoted to the treatment of cases of Phthisis. The great success which attended this experiment sufficiently proved its value, and early in 1909 the

number of beds for this purpose was increased to 50, and an additional 30 beds have since been allocated to this disease. The structural completeness of this hospital, the climatic and soil conditions obtaining, together with the exceptional facilities for laboratory work, render the Hospital at Fazakerley particularly suited to this undertaking. Evidence is not yet available to show how far the great temporary improvement in the disease has been followed by its permanent arrest in those patients who have been discharged from Hospital, but a system is adopted by which they shall present themselves at regular intervals for examination. Patients subsequent to their discharge from the Sanatorium Wards continue, where necessary, under the observation of the inspectors of the Health Department. This measure has been adopted in a large majority of the cases, and has proved a valuable adjunct to hospital treatment.

Wards at Parkhill Hospital were set apart for cases of Tuberculosis towards the end of the year 1911 and during 1912; at the close of this year there were 97 beds set apart for the treatment of patients suffering from Phthisis.

The arrangements in practice at the Fazakerley and Parkhill Sanatoria for the treatment of cases of Tuberculosis during recent years have been continued and extended under the provisions of the National Insurance Act.

At Fazakerley the patients treated under the heading of Tuberculosis during 1912 include 60 under the age of 15 years. The system, practised at this institution, whereby a short period each day is devoted to the purposes of elementary teaching, has been found of great value, as in previous years, in the care and management of the young. The advantages offered by the surrounding woods and grounds have afforded ample facilities for open-air demonstrations and nature studies. In many instances children who have been, by reason of their illness, absent from school for considerable periods, have received marked educational advantages from this system, in addition to the relief of their symptoms.

During the year it has been the practice to impart to patients, as far as possible, a knowledge of the chief facts relating to their disease. They have been instructed in the rules of living, necessary for the maintenance

of health and the safety of their associates. It is impossible in many cases to estimate the curative effect of sanatorium treatment, but there can be no question as to the educative influence which this treatment exerts, not only upon the patients themselves, but upon those with whom they are subsequently brought in contact. It is with this object in view that the hygiene of treatment and sanitary method have been practised at Fazakerley on principles within the understanding of all. No measures are adopted which cannot be subsequently practised by the patient on leaving the sanatorium.

Much research work of value has been carried out in the laboratory of the institution, with the result that those under treatment have received benefit from the many advances which have been recently made in the scientific treatment of their disease. The routine examination of sputum, discharges, &c., has added to the laboratory work carried out at this institution.

The principles of graduated exercise in treatment have received the same attention as in former years, and patients have been advised, in all cases, as to the nature of the employment and recreation to which they are suited on leaving the institution.

Patients have been classified on admission in accordance with the scheme submitted in previous Reports.

The following figures represent the number of cases admitted in each Class during 1912:—

Class I.	Early cases, disease confined to 1 lobe	10
Class II.	„ „ „ 2 lobes	49
Class III.	Three or more lobes affected ...	60
Class IV.	Advanced cases	29
Not classified	... ..	10
Re-admitted	... ..	16

Classes III. and IV. include a limited number of patients admitted for educational purposes only.

A record has been kept during the year of the sources from which each patient derived his, or her, infection, as far as could be ascertained. It is interesting to note that the numbers under headings A to E, i.e., those whose infection is stated to have had a domestic, or family, origin, form a considerable proportion of the total.

A.	Definite limited domestic infection with definite onset ...	12
B.	Definite limited domestic infection with indefinite onset...	5
C.	Continuing domestic infection with definite onset	36
E.	Continuing domestic infection with indefinite onset	17
F.	Continuing extra domestic infection with indefinite onset —	
G.	No exposure known, with indefinite onset	21
H.	No exposure known, with definite onset	44
K.	Suspicion of temporary exposure with definite onset ...	19
L.	Suspicion of temporary exposure with indefinite onset...	16
M.	History incomplete	4

CONDITIONS OF PATIENTS ON DISCHARGE.

Disease arrested	74
Disease quiescent	60
Disease unimproved, or worse	6*
Died	15

*This figure includes 4 cases prematurely discharged for the following reasons:—

Disciplinary	2
Domestic	2

INFECTIOUS DISEASE.

The following table shows the number and nature of cases of Infectious Disease coming under the notice of the Medical Officer of Health during the year 1912, including those reported under the Notification Act.

YEAR—1912.	FEVER.				Smallpox.	Scarlatina.	Measles.	Diphtheria and Membranous Croup.	Puerperal Fever.	Erysipelas.	TOTAL.
	Typhus.	Typhoid.	Simple.	Relapsing.							
January .....	...	...	...	...	...	312	223	110	2	70	717
February .....	...	8	...	...	...	247	257	96	3	72	683
March	2	6	...	...	1	242	401	105	4	75	836
April .....	...	6	...	...	1	216	388	70	4	39	724
May .....	...	14	...	...	...	248	1045	75	2	74	1,458
June .....	...	14	...	...	1	248	1189	50	3	79	1,584
July	1	10	...	...	...	183	303	60	3	58	618
August	2	10	...	...	...	216	356	60	4	79	727
September	1	16	...	...	...	237	697	87	5	61	1,104
October.....	...	10	...	...	...	261	1327	86	2	81	1,767
November .....	...	17	...	...	...	234	1047	111	2	93	1,504
December.....	...	13	...	...	1	223	842	85	3	78	1,245
TOTAL	6	124	...	...	4	2,867	8,075	995	37	859	12,967
Removed to hospital	6	108	...	...	3	2,367	752	791	30	125	4,182

The number of patients removed to hospital includes those taken to the general hospitals as well as those taken to the city hospitals.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT

The number of notifications received by the Medical Officer under the above Act, during the past five years, were as follows:—

	<u>1908.</u>	<u>1909.</u>	<u>1910.</u>	<u>1911.</u>	<u>1912.</u>
January ...	407	595	545	534	535
February ...	395	533	455	471	439
March ...	449	549	559	556	475
April ...	535	590	457	497	343
May ...	650	588	450	584	441
June ..	631	602	441	482	402
July ...	624	478	443	518	341
August ...	541	434	590	398	382
September ...	684	507	676	545	430
October ...	668	543	687	603	490
November ...	653	602	634	663	476
December ...	651	583	578	544	424
	<u>6,888</u>	<u>6,604</u>	<u>6,515</u>	<u>6,395</u>	<u>5,178</u>

The diseases were specified as follows:—

	<u>1908.</u>	<u>1909.</u>	<u>1910.</u>	<u>1911.</u>	<u>1912.</u>
Smallpox ...	4	7	13	11	6
Scarlet Fever ...	4,242	4,001	4,152	3,710	2,885
Typhoid Fever ...	490	331	272	221	163
Typhus Fever ..	34	24	14	28	4
Continued Fever	18	14	7	8	2
Remittent Fever	1	—	—	—	—
Relapsing Fever .	—	1	—	2	—
Fever ...	1	2	—	1	1
Puerperal Fever..	63	65	43	52	42
Diphtheria ...	1,104	1,278	1,135	1,334	1110
Membranous Croup.	32	26	38	26	18
Erysipelas ...	896	846	824	997	897
Anthrax ...	3	9	11	5	9
Cerebro-Spinal Fever	—	—	5	—	5
Acute Poliomyelitis	—	—	—	—	31
*Ophthalmia Neonatorum	—	—	—	—	5
	<u>6,888</u>	<u>6,604</u>	<u>6,515</u>	<u>6,395</u>	<u>5,178</u>

* Notifiable since July, 1912.

NUMBER OF CASES REPORTED AND NUMBER REMOVED TO HOSPITALS, 1889-1912.

	SMALLPOX.		SCARLET FEVER.		TYPHOID.		TYPHUS.		DIPHTHERIA AND MEMBRANOUS GROUP.		MEASLES.	
	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.	Number Reported.	Number Removed.
1889	9	8	1,832	533	670	302	158	124	122	39	3,175	104
1890	2	2	3,520	938	506	296	103	87	212	55	4,013	152
1891	21	21	1,176	448	588	350	175	156	237	49	2,262	160
1892	177	177	1,554	603	699	345	73	70	227	29	3,376	150
1893	75	73	3,538	1,380	1,396	728	183	168	250	30	2,316	94
1894	229	226	3,963	1,415	1,350	745	325	312	337	47	2,494	122
1895	130	127	2,710	1,039	1,306	662	162	158	340	77	3,462	93
1896	8	8	3,584	1,589	1,063	539	305	298	533	120	2,930	138
1897	6	6	3,001	1,641	991	559	158	156	430	118	4,389	94
1898	17	16	2,424	1,467	863	585	92	84	554	191	2,458	105
1899	10	10	2,416	1,537	988	668	70	64	793	277	5,107	140
1900	156	154	1,968	1,198	731	450	42	41	709	312	2,372	108
1901	37	37	3,310	1,814	864	567	55	54	870	467	6,766	185
1902	560	559	5,914	2,994	1,026	670	155	155	1,102	516	7,141	177
1903	1,720	1,719	4,053	2,145	681	462	272	266	878	412	2,728	114
1904	27	27	2,988	2,214	434	296	97	97	1,061	690	9,453	428
1905	15	14	4,308	3,147	325	235	98	95	1,003	606	3,938	322
1906	19	19	2,959	2,191	491	360	52	49	910	567	6,819	389
1907	19	19	2,741	2,144	482	373	116	116	929	631	5,640	342
1908	7	7	4,295	3,528	447	360	21	20	1,017	721	4,653	227
1909	9	9	4,059	3,289	278	223	17	17	1,133	819	6,356	585
1910	10	10	4,202	3,546	231	176	11	11	1,112	738	4,755	478
1911	19	19	3,641	3,046	181	144	26	26	1,114	866	4,719	304
1912	4	3	2,867	2,367	124	108	6	6	995	791	8,075	752

The following tables, prepared by the Medical Staff of each Hospital show the number of patients, the nature of the illness, and the results, at each of the six hospitals during the year 1912.

CITY HOSPITAL NORTH, NETHERFIELD ROAD.

Visiting Physician, Dr. R. I. RICHARDSON.
Resident Physician, Dr. GAMLIN.

DISEASES.	Remaining Dec. 31st, 1911.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.	105	728	—	833	96	—	572	134	2	31	4·2
Enteric Fever.	6	67	—	73	—	—	48	15	1	10	14·9
Typhus Fever.	—	5	—	5	—	—	4	—	—	1	20·0
Diphtheria	—	1	—	1	—	—	1	—	—	—	—
with Scarlet F.	—	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—	—
Measles	—	16	—	16	—	—	9	—	—	7	43·7
Other Diseases	—	68	—	68	—	—	48	3	—	17	25·0
Isolation and Observation Cases	—	54	—	54	—	—	28	8	1	18	33·3
Totals ...	111	939	—	1050	96	—	710	160	4	84	8·0

SCARLET FEVER.

	AGE PERIODS.							
	Under5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	211	343	151	18	2	2	2	728
No. of Deaths ...	23	5	2	1	—	—	—	31
Percentage of Deaths	10·9	1·4	1·3	5·5	—	—	—	4·2

ENTERIC FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of Cases.....	5	11	9	16	20	6	—	67
No. of Deaths	—	—	2	2	5	1	—	10
Percentage of Deaths	—	—	22·2	12·5	25·0	16·6	—	14·9

TYPHUS FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of Cases	—	—	—	3	—	2	—	5
No. of Deaths	—	—	—	1	—	—	—	1
Percentage of Deaths	—	—	—	33·3	—	—	—	20·0

DIPHTHERIA with SCARLET FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of Cases.....	—	—	1	—	—	—	—	1
No. of Deaths.....	—	—	—	—	—	—	—	—

Corrected Diagnosis.	DISEASES NOTIFIED AS :—			
	Scarlet. Fever.	Enteric. Fever.	Typhus Fever.	Deaths.
Tubercular Meningitis	1	3	—	4*
Nil	10	—	—	—
Dietetic Rash	2	—	—	—
Erythema	1	—	—	—
Lobar Pneumonia	1	9	—	3
Marasmus	1	—	—	1
German Measles	1	—	—	—
Empyema	1	—	—	1
Gastric Ulcer.....	—	1	—	—
Miliary Tuberculosis.....	—	2	—	2
Broncho-Pneumonia	—	2	1	2
Bronchitis	—	2	—	—
Gastric Catarrh	—	12	—	—
Delirium Tremens	—	1	—	1
Pelvic Cellulitis.....	—	3	—	—
Multiple Abscesses of Liver	—	1	—	1
Acute Rheumatism	—	1	—	—
Meningitis	—	1	—	—
Venereal Disease	—	1	—	—
Subacute Appendicitis.....	—	1	—	—
Malaria	—	4	—	—
Urethral Stricture.....	—	1	—	—
Nephritis.....	—	1	—	—
Tubercular Peritonitis	—	1	—	1
Thrombosed Lateral Sinus	—	—	1	—
	18	47	2	16

* Died within 48 hours of admission.

Besides the above, one case of Bubonic Plague was admitted and the patient died.

CITY HOSPITAL SOUTH, GRAFTON STREET.

Visiting Physician, Dr. N. E. ROBERTS.

Resident Physician, Dr. GEORGE MACLEOD.

DISEASES.	Remaining Dec. 31st, 1911.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.....	47	390	—	437	20	2	321	78	5	16	4·1
Enteric Fever.	3	2	—	5	—	—	4	—	—	1	50·0
Diphtheria	19	87	—	106	—	1	92	2	2	*11	12·6
Measles	1	200	—	201	—	2	143	24	7	*32	16·0
Other Diseases.....	3	36	—	39	—	—	34	—	1	5	13·8
Isolation & Obser- vation Cases	2	25	—	27	—	—	27	—	—	—	—
Totals	75	740	—	815	20	5	621	104	15	*65	8·78

* One admitted 1911, died 1912.

SCARLET FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	
No. of Cases	176	146	53	10	4	1	—	390
No. of Deaths	13	2	—	1	—	—	—	16
Percentage of Deaths	7·38	1·36	—	10·0	—	—	—	4·1

ENTERIC FEVER.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 up- wards.	
No. of Cases	—	1	—	1	—	—	—	2
No. of Deaths.....	—	—	—	1	—	—	—	1
Percentage of Deaths..	—	—	—	100·0	—	—	—	50·0

MEASLES.

	AGE PERIODS.							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 up- wards.	
No. of Cases	159	27	10	4	—	—	—	200
No. of Deaths.....	32	—	—	—	—	—	—	32†
Percentage of Deaths..	20·12	—	—	—	—	—	—	16·0

DIPHTHERIA.

	AGE PERIODS							Total.
	Under 5	5—10	10—20	20—30	30—40	40—50	50 up- wards.	
No. of Cases	45	26	14	2	—	—	—	87
No. of Deaths	7	3	—	—	—	—	—	10
Percentage of Deaths..	15·5	11·5	—	—	—	—	—	12·6

MEASLES—1-5 YEARS.

	AGE PERIODS.					Total.
	1	2	3	4	5	
No. of Cases	26	45	44	20	24	159
No. of Deaths.....	9	9	9	2	3	32†
Percentage of Deaths..	34·4	20·0	20·4	10·0	12·5	20·12

† The cases of measles admitted to this Hospital have been drawn from the very poor classes; acute bronchitis or broncho-pneumonia is already present on admission in many instances, and the deaths (with the exception of two) have been due to this latter very serious complication; four of these deaths have occurred in foreign emigrants.

Corrected Diagnosis.	DISEASES NOTIFIED AS :—						
	Scarlet Fever.	Diphtheria.	Enteric.	Measles.	Rubella	?	Died.
Scarlet Fever	—	11	—	2	—	—	—
Scarlet Fever and Diphtheria	13	—	—	—	—	—	—
Scarlet Fever and Varicella	12	—	—	—	—	—	—
Scarlet Fever and Measles.....	2	—	—	—	—	—	—
Measles	19	—	—	—	1	—	5
Measles and Varicella	—	—	—	3	—	—	—
Measles and Pertussis.....	—	—	—	1	—	—	—
Varicella	1	—	—	—	—	—	—
Pulmonary Tuberculosis.....	—	—	2	—	—	—	1
Acute Miliary Tuberculosis	—	—	—	1	—	—	1
Tubercular Meningitis.....	—	—	1	—	—	—	1
Tonsillitis	—	18	—	—	—	2	—
Isolation	24	1	2	—	—	—	—
Pneumonia	1	2	1	—	—	—	1
Appendicitis	—	—	1	—	—	—	—
Septic Peritonitis.....	1	—	—	—	—	—	1
Cystitis	—	—	1	—	—	—	—
Malignant Endocarditis	—	—	1	—	—	—	—
Urticaria	1	—	—	—	—	—	—
Total	74	32	9	7	1	2	10

CITY HOSPITAL, PARKHILL.

Visiting Physician, Dr. N. E. ROBERTS.

Resident Physician, Dr. D. F. MACRAE.

DISEASES.	Remaining Dec. 31st, 1911.	Admitted during the year.	Transferred from other City Hospitals	Total under Treat- ment during the year.	Transferred to Convalescent Hospital	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever	85	228	—	313	—	12	296	—	—	5	2·1
Tuberculosis	8	185	—	193	—	—	86	66	1	41	22·1
Diphtheria.....	—	60	—	60	—	4	46	—	—	10	16·6
Measles	9	236	1	246	—	—	196	16	3	34	14·4
Other Diseases	—	12	—	12	—	—	9	—	—	3	25·0
Isolation and Obser- vation Cases.....	18	13	—	31	—	—	31	—	—	—	—
Totals	120	734	1	855	—	16	664	82	4	93	12·6

SCARLET FEVER.

	AGE PERIODS.							Total.
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	
No. of cases.....	72	102	46	6	2	—	—	228
No. of deaths	4	1	—	—	—	—	—	5
Percentage of deaths.....	5·5	0·9	—	—	—	—	—	2·1

DIPHThERIA.

	AGE PERIODS.							Total.
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	
No. of cases	15	21	17	3	4	—	—	60
No. of deaths	3	4	2	—	1	—	—	10
Percentage of deaths.....	20	19·04	11·7	—	25	—	—	16·6

Corrected Diagnosis.	DISEASES NOTIFIED AS :—			
	Scarlet Fever.	Measles.	Diphtheria.	Died.
Measles and Diphtheria	—	1	—	1
Scarlet Fever and Diphtheria ...	3	—	—	—
Scarlet Fever	—	—	2	—
Gastritis.....	1	—	—	1
Diphtheria and Phthisis	—	—	1	1*
Measles	1	—	—	—
Diphtheria and Scarlet Fever ...	—	—	3	—

* Death was due to Phthisis.

CITY HOSPITAL EAST, MILL LANE, OLD SWAN.

Visiting Physician, DR. H. A. CLARKE.
Resident Physician, DR. A. E. HODGSON.

DISEASES.	Remaining Dec. 31st, 1911.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment during the year.	Transferred to Convalescent Hospital.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever...	81	454	—	535	68	—	410	50	2	7	1·5
Enteric Fever..	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	48	323	—	371	—	—	286	52	16	33	10·2
Measles	—	21	—	21	—	—	17	—	—	4	19·04
Other Diseases.	14	82	—	96	—	—	74	11	2	11	13·4
Isolation and Observation Cases.....	—	18	—	18	—	—	18	—	—	—	—
Totals.....	143	898	—	1041	68	—	805	113	20	55	6·1

SCARLET FEVER.

	AGE PERIODS							
	Under 5	5—10	10—20	20—30	30—40	40—50	50 upwards.	Total.
No. of Cases.....	106	230	95	13	9	2	—	455
No. of Deaths.....	3	2	2	—	—	—	—	7
Percentage of deaths	2·8	·8	2·1	—	—	—	—	1·5

DIPHTHERIA.

	AGE PERIODS.							
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	Total
No. of Cases	112	121	71	17	3	—	..	324
No. of Deaths.....	25	8	—	—	—	—	—	33*
Percentage of Deaths	22·3	6·6	—	—	—	—	—	10·2

* Of these deaths 16, or 48·4%, took place within 48 hours after admission to Hospital.

Corrected Diagnosis.	DISEASES NOTIFIED AS :—		
	Diphtheria.	Scarlet Fever.	Deaths.
Tonsillitis	48	—	—
Broncho-Pneumonia	5	1	4
Laryngitis	4	—	—
Septicæmia	3	—	3
Cellulitis	3	—	—
Cellulitis and Septicæmia	1	—	1
Stomatitis	3	—	—
Syphilis	2	—	—
Pharyngitis	2	—	—
Meningitis	—	2	2
Lobar Pneumonia.....	1	1	—
Scalds (face, arms and chest).....	—	2	—
Gastritis	1	—	—
Dermatitis	—	1	—
Cerebral Hæmorrhage	—	1	1
Erysipelas	1	—	—
Total	74	8	11

CITY HOSPITAL, FAZAKERLEY.

Medical Superintendent, DR. C. RUNDLE.

Resident Physicians { DR. H. M. WILLIAMS.
DR. W. DAWSON.

Diseases.	Remaining Dec. 31st., 1911.	Admitted during the year.	Transferred from other City Hospitals	Total under Treatment during the year.	Transferred to other City Hospitals	Discharged Cured	Remaining at end of year 1912	Died within 48 hours of Admission	Total Deaths	Total Mortality per cent. of Admissions.
Scarlet Fever	129	297	18	444	7	392	35	3	10	3·3
Enteric Fever.....	2	4	—	6	—	6	—	—	—	—
Tuberculosis	48	174	—	222	—	*140	67	—	15	8·6
Diphtheria	40	303	—	343	—	264	55	10	24	7·9
Erysipelas	14	125	—	139	—	116	12	5	11	8·8
Measles	—	107	—	107	—	93	3	3	11	10·2
Other Diseases	11	301	4	316	—	237	30	20	49	16·2
Epidemic Diarrhoea.....	—	40	—	40	—	33	—	1	7	17·5
Isolation and Observation Cases	—	20	—	20	—	20	—	—	—	—
Puerperal Fever	2	21	—	23	—	17	—	2	6	28·5
Totals	246	1392	22	1660	7	1318	202	44	133	9·5

* Disease improved or arrested.

SCARLET FEVER.

	AGE PERIODS.							
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	Total
No. of Cases.....	100	128	49	12	7	1	—	297
No. of Deaths.....	6	3	—	1	—	—	—	10
Percentage of Deaths	6·0	2·3	—	8·3	—	—	—	3·3

ENTERIC FEVER.

	AGE PERIODS.							
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	Total
No. of Cases	—	—	2	1	—	1	—	4
No. of Deaths.....	—	—	—	—	—	—	—	—

DIPHThERIA.

	AGE PERIODS.							
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	Total
No. of Cases	93	118	60	18	13	1	—	303
No. of Deaths.....	12	10	2	—	—	—	—	24
Percentage of Deaths	12·9	8·47	3·3	—	—	—	—	7·9

Average duration of stay in hospital of patients whose treatment was completed during the year 1912 was as follows :—

Scarlet Fever	50 days.
Diphtheria	49 ,,
Measles	25 ,,
Typhoid	55 ,,

CORRECTION OF DIAGNOSIS.

Corrected Diagnosis.	DISEASES NOTIFIED AS—												
	Scarlet Fever	Diphtheria	Enteric Fever	Erysipelas	Measles	Epidemic Diarrhoea	Tuberculosis.	Puerperal Fever	Small-pox	Pertussis.	Varicella.	Croup.	Rubella.
Rubella	3	—	—	—	3	—	—	—	—	—	—	—	—
Scarlet Fever and Pertussis.....	3	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever and Diphtheria...	1	8	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever and Varicella.....	2	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever, Measles and Varicella	1	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever and Measles	1	—	—	—	—	—	—	—	—	—	—	—	—
Varicella and Measles	1	—	—	—	—	—	—	—	—	—	1	—	1
Varicella, Measles & Pertussis...	1	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria and Pertussis	1	5	—	—	—	—	—	—	—	—	—	—	—
Diphtheria and Measles	—	4	—	—	3	—	—	—	—	—	—	1	4
Diphtheria and Erysipelas	—	1	—	—	—	—	—	—	—	—	—	—	—
Measles and Pertussis	2	—	—	—	8	—	—	—	—	—	—	—	—
Erysipelas and Pertussis	—	—	—	1	—	—	—	—	—	—	—	—	—
Acute Bronchitis & Laryngitis...	—	1	—	—	—	—	—	—	—	—	—	—	1
Scarlet Fever	—	17	—	—	—	—	—	—	—	—	—	—	1
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	2	—
Tonsillitis	20	38	—	—	—	—	—	—	—	—	—	—	—
Measles	3	4	—	—	—	—	—	—	—	3	—	—	3
Pertussis	—	1	—	—	—	—	1	—	—	—	—	—	2
Broncho-Pneumonia	3	4	—	—	—	—	—	—	—	—	—	—	6
Impetigo.....	—	—	—	—	—	—	—	—	1	—	6	—	—
Scabies... ..	—	—	—	—	—	—	—	—	—	—	2	—	—
Herpes Zoster	—	—	—	1	—	—	—	—	—	—	—	—	—
Psoriasis	1	—	—	—	—	—	—	—	—	—	—	—	—
Erythema	6	—	—	—	—	—	—	—	—	—	—	—	—
Papular Erythema	—	—	—	—	—	—	—	—	—	—	2	—	—
Eczema	—	—	—	2	—	—	—	—	—	—	—	—	—
Syphilis	—	1	—	—	1	—	—	—	—	—	—	—	—
Icterus Neonatorum	1	—	—	—	—	—	—	—	—	—	—	—	—
Cellulitis	—	—	—	3	1	—	—	—	—	—	—	—	2

DISEASES NOTIFIED AS—*Continued*—

Corrected Diagnosis.	Scarlet Fever	Diphtheria	Enteric Fever	Erysipelas	Measles	Epidemic Diarrhoea	Tuberculosis	Puerperal Fever	Small-pox	Pertussis	Varicella	Croup	Rubella	Poliomyelitis	Cellulitis	Deaths
Lobar Pneumonia	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Asthma	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Acute Bronchitis	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Laryngitis	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	1
Catarrhal Laryngitis...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ulcerative Laryngitis	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Bronchiectasis	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Pharyngeal Catarrh ..	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Anæmia	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Purulent Ophthalmia	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Puerperal Fever.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Septicæmia.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Acute Mastitis	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Pulmonary Tuberculosis	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Intra-abdominal Haemorrhage	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
Pyorrhæa Alveolaris...	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Tubercular Meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Enteritis	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—
Marasmus	—	1	—	—	—	1	—	—	—	—	—	—	1	—	—	3
Mal-Assimilation	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
Retro-Pharyngeal Abscess	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
No Disease	1	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—
	53	88	2	8	16	4	7	5	1	3	12	3	2	1	2	33

CITY HOSPITAL, FAZAKERLEY ANNEXE.

Medical Superintendent, DR. C. RUNDLE.
Resident Physician, Dr. C. R. WILKINS.

Diseases.	Remaining Dec. 31st, 1911.	Admitted during the year.	Transferred from other City Hospitals.	Total under Treatment dur- ing the year.	Transferred to other City Hospitals.	Discharged Cured.	Remaining at end of year.	Died within 48 hours of Admission.	Total Deaths.	Total Mortality per cent. of Admissions.
Scarlet Fever.....	71	275	264	610	—	536	72	—	2	0·7
Small Pox	—	2	—	2	—	2	—	—	—	—
Measles	2	200	—	202	—	172	10	—	20	10·0
Other Diseases.....	3	57	—	60	—	49	5	—	6	10·5
Isolation and Observation Cases	1	20	—	21	—	21	—	—	—	—
Totals	77	554	264	895	—	780	87	—	28	5·05

SCARLET FEVER.

	AGE PERIODS.							
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards.	Total.
No. of Cases	89	111	67	3	5	—	—	275
No. of Deaths	1	1	—	—	—	—	—	2
Percentage of Deaths	1·12	0·9	—	—	—	—	—	0·7

SMALL POX.

	AGE PERIODS.							
	Under 5	5-10	10-20	20-30	30-40	40-50	50 up- wards	Total.
No. of Cases.....	—	—	1	1	—	—	—	2
No. of Deaths.....	—	—	—	—	—	—	—	—

Corrected Diagnosis.	DISEASES NOTIFIED AS:—											
	Scarlet Fever.	Scarlet Fever ?	Measles	Measles ?	Diphtheria	Diphtheria ?	Small-pox	Small-pox ?	Chicken-pox or Small-pox	Rash ?	German Measles	Varicella ?
Scarlet Fever	—	6	—	—	6	2	—	—	—	—	—	—
Measles	9	5	—	3	1	—	1	—	—	1	2	—
Tonsillitis	5	—	—	—	4	1	—	—	—	—	—	—
German Measles	1	1	—	—	—	—	—	—	—	—	—	—
Chicken-pox	—	—	—	—	—	—	—	—	1	—	—	—
Scarlet Fever & Diphtheria..	1	—	—	—	1	—	—	—	—	—	—	—
Broncho-Pneumonia	—	1	—	—	—	—	—	—	—	—	—	—
Erythema	—	—	2	—	—	—	1	—	—	—	—	—
Cerebral Tumour.....	1	—	—	—	—	—	—	—	—	—	—	—
Syphilis.....	—	—	—	—	—	—	—	1	—	—	—	1
Laryngitis and Broncho- Pneumonia	—	—	—	—	1	—	—	—	—	—	—	—
Measles and Varicella.....	—	1	—	—	—	—	—	—	—	—	—	—
Total	17	14	2	3	13	3	2	1	1	1	2	1

Average stay in hospital—Scarlet Fever 43·10 days.

“ “ “ Measles 26 “

A

The following tables I, II, III, IV, and marked also A, B, C, D, are prepared pursuant to an instruction of the Local Government Board.

CITY OF LIVERPOOL.

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1912 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Uncor-rected Number.	Nett.		Number.	Rate.	of Non-residents registered in the District.	of Resi-dents not registered in the District.	Under 1 year of age.		At all ages.	
			Number.	Rate.					Number.	Rate per 1000 Nott Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1907.....	730361	23654	—	32·3	14408	19·7	732	46	3384	143	13722	18·7
1908.....	734648	23891	—	32·5	14663	19·9	733	76	3356	140	14006	19·0
1909.....	738960	23591	—	31·9	14761	19·9	779	72	3377	143	14054	19·0
1910.....	743295	23054	—	31·0	13917	18·7	574	113	3216	139	13456	18·1
1911.....	747627	22493	22437	30·0	15292	20·4	685	363	3472	154	14970	20·0
1912.....	752021	22233	22164	29·4	14003	18·6	639	†407	2781	125	13771	18·3

* Rates in columns 5, 7 and 13 calculated per 1,000 of estimated population. † 74 of these deaths assigned to Liverpool were without any definite address.

NOTE.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. For years before 1911 the corrected number of births is not available.

The deaths included in Column 6 of this table are the whole of those registered during the year as having actually occurred within the district.

In Column 12 is entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in Column 9. Deaths in Column 10 are similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

“Transferable Deaths” are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, *e.g.*, casuals, must not be included in Columns 8 or 9, except in certain instances under 3 (*b*) below. The Medical Officer of Health will state in Column 8 the number of transferable deaths of “non-residents” which are to be deducted, and will state in Column 9 the number of deaths of “residents” registered outside the district which are to be added in calculating the net death-rate of his district.

The following special cases arise as to Transferable Deaths:—

(1) Persons dying in Institutions for the sick or infirm, such as hospitals, lunatic asylums, workhouses, and nursing homes (but not almshouses) must be regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from violence are to be referred (*a*) to the district of residence, under the general rule; (*b*) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known; (*c*) failing this, to the district where death occurred, if known; and (*d*) failing this, to the district where the body was found.

Area of District in acres)
(exclusive of area 16,619.
covered by water.)

Total population at all ages.....746,421 } At Census
Number of inhabited houses144,808 } of
Average number of persons per house.....5·15 } 1911.

TABLE II.
CITY OF LIVERPOOL.
Cases of Infectious Disease notified during the Year 1912.

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.								TOTAL CASES NOTIFIED IN EACH LOCALITY. (e.g. Parish or Ward) of the District.														Public Institutions (Workhouses and Hospitals).	Emigrants, Seamen, &c., passing through the City.	Total Cases Removed to Hospital.
	At all Ages.	At Ages—Years.							Scotland.	Exchange.	Abercromby.	Everton.	Kirkdale.	West Derby (West).	Toxteth.	Walton.	West Derby (East).	Wavertree.	Toxteth (East).	Garston.	Fazakerley.				
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.																	
Small-pox	4	...	...	...	3	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2	4
Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	2	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2	
Diphtheria (including Membranous croup)	995	10	296	547	77	62	3	...	26	32	39	159	60	108	145	220	56	90	10	15	5	12	18	789	
Erysipelas	859	20	28	65	91	334	269	52	103	116	61	173	58	65	71	78	27	26	14	23	3	39	2	125	
Scarlet fever	2867	33	1110	1528	124	70	1	1	79	63	64	541	178	358	419	373	257	309	90	25	23	70	18	2367	
Typhus fever	6	...	...	...	1	5	...	...	1	...	2	1	...	...	2	...	...	...	...	...	...	...	...	5
Enteric fever	124	...	6	26	22	62	7	1	9	6	3	20	3	7	14	12	3	4	3	4	...	2	34	73	
Relapsing fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	37	...	...	...	10	27	...	...	2	5	...	9	6	4	4	4	1	...	1	...	...	...	1	20
Ophthalmia Neonatorum	5	5	...	...	...	...	...	...	...	...	...	2	...	...	2	1	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	5	...	2	2	1	...	...	...	1	...	1	1	...	1	...	...	1	...	...	...	...	...	...	1
Poliomyelitis	31	6	22	1	1	1	...	...	2	...	...	5	4	4	1	4	2	3	2	1	...	...	3	20
Pulmonary Tuberculosis (Under Regulations of 1908	1137	1	26	131	161	503	293	22	189	148	109	250	75	121	103	35	42	17	4	10	2	...	32	359	
	Under Regulations of 1911	2553	14	116	436	461	1164	313	49	251	198	162	463	189	332	384	171	180	87	68	45	5	...		17
Anthrax	9	...	...	...	2	6	1	...	...	1	...	1	1	1	3	1	...	1	...	...	...	...	...	7
Totals	8634	89	1606	2737	955	2235	887	125	664	569	443	1626	574	1001	1148	899	568	538	192	123	38	123	128	3772	

Isolation Hospitals (Name and Situation...)

City Hospital North, Everton.	Total available beds.....1,170
South, Toxteth,	
Park Hill, Toxteth,	
East, West Derby (East),	
Fazakerley, Fazakerley,	
Annexe, Fazakerley.	

Number of Diseases that
can be concurrently
treated 13

TABLE III.

CITY OF LIVERPOOL.

Causes of, and ages at, Death during the Year 1912.

(See notes at back.)

C

Causes of Death.	NETT DEATHS AT THE SURJOINED AGES OF "RESIDENTS" WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT (a).									Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District (b).
	All ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	
1	2	3	4	5	6	7	8	9	10	11
All causes { Certified (c)	13482	2672	1208	982	550	467	1886	3019	2698	5375
{ Uncertified	289	109	12	12	6	5	23	53	69	6
1. Enteric Fever	21	—	—	—	4	3	11	3	—	19
2. Small-pox	1	—	—	—	—	—	1	—	—	—
3. Measles	867	150	348	324	45	—	—	—	—	246
4. Scarlet Fever	86	—	16	39	26	3	2	—	—	76
5. Whooping Cough	267	114	76	67	10	—	—	—	—	62
6. Diphtheria and Croup.	106	5	19	47	31	2	2	—	—	88
7. Influenza	51	3	1	—	—	2	8	18	19	7
8. Erysipelas	21	3	—	—	—	3	7	6	2	15
9. Phthisis (Pulmonary Tuberculosis) ...	1174	2	4	11	53	176	590	308	30	687
10. Tuberculous Meningitis.	111	29	16	33	27	6	—	—	—	48
11. Other Tuberculous Diseases	216	22	28	40	39	30	35	18	4	110
12. Cancer, malignant disease.	728	—	1	4	1	5	97	399	221	307
13. Rheumatic Fever	36	1	—	1	9	8	9	7	1	9
14. Meningitis (See note (d))	123	40	24	20	20	6	6	6	1	27
15. Organic Heart Disease.....	1016	—	2	3	40	50	180	379	362	397
16. Bronchitis	1411	237	98	40	8	6	61	387	574	418
17. Pneumonia (all forms)	1469	278	277	183	64	38	205	271	153	457
18. Other diseases of Respiratory organs	164	16	17	14	7	9	26	42	33	44
19. Diarrhoea and Enteritis. (See note (e))	530	320	138	34	6	—	9	9	14	193
20. Appendicitis and Typhlitis	20	—	—	1	9	2	6	1	1	24
21. Cirrhosis of Liver	82	—	—	—	—	1	17	51	13	30
21a. Alcoholism	54	—	—	—	—	—	31	23	—	35
22. Nephritis and Bright's Disease	333	4	3	4	7	9	72	156	78	146
23. Puerperal Fever	16	—	—	—	—	1	15	—	—	15
24. Other accidents and diseases of Pregnancy and Parturition	49	—	—	—	—	9	40	—	—	20
25. Congenital Debility and Malformation, including Premature Birth	935	935	—	—	—	—	—	—	—	191
26. Violent Deaths, excluding Suicide ...	487	101	21	45	44	23	94	114	45	242
27. Suicide	43	—	—	—	—	4	15	21	3	9
28. Other Defined Diseases	3239	499	65	71	105	75	368	844	1212	1458
29. Diseases ill-defined or unknown	115	22	66	13	1	1	2	9	1	1
	13771	2781	1220	994	556	472	1909	3072	2767	5381
Sub-Entries included in above figures—										
Cerebro-Spinal Meningitis	5	2	—	2	—	1	—	—	—	2
Poliomyelitis	3	1	—	—	1	—	—	1	—	1
*Typhus Fever	2	—	—	—	—	—	2	—	—	2
*Anthrax	1	—	—	—	—	—	1	—	—	1
*Plague.....	2	—	—	—	1	1	—	—	—	1
*Pneumonia	775	83	63	62	43	33	169	213	109	272

* Sub-Entries should here be made for other deaths which it is desirable to distinguish, on account of their administrative importance or special interest (e.g., any deaths from Anthrax, Typhus or Glanders, which have been included under 28, Other Defined Diseases; or deaths from pneumonia other than broncho-pneumonia which have been included under 17, Pneumonia all forms).

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death, which has been consulted and followed in all cases of doubt.

- (a) All "Transferable Deaths" of residents, *i.e.* of persons resident in the District who have died outside it, are *included* with the other deaths in Columns 2-10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who have died in the District, are in like manner *excluded* from these columns. For the precise meaning of the term "transferable deaths" see footnote to Table I.

The total deaths in Column 2 of Table III. equal the figures for the year in Column 12 of Table I.

- (b) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or of non-residents, are entered in the last column of Table III.
- (c) All deaths certified by registered Medical Practitioners and all Inquest cases are classed as "Certified"; all other deaths are regarded as "Uncertified."
- (d) Exclusive of "Tuberculous Meningitis" (10), but inclusive of Cerebro-Spinal Meningitis.
- (e) Title 19 has been used for deaths from Diarrhoea and Enteritis at all ages. (In the "Short List" deaths from Diarrhoea, and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28.)

TABLE IV.
CITY OF LIVERPOOL.

INFANT MORTALITY DURING THE YEAR 1912.

Nett Deaths from stated Causes at various Ages under One Year of Age.

(See Note (a) at back.)

CAUSE OF DEATH.							Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3 Months and under 6 Months.	6 Months and under 9 Months.	9 Months and under 12 Months.	Total Deaths under One Year.
All Causes.	Certified ... ..	...	...	...	...	...	475	122	117	110	824	481	505	440	422	2672
	Uncertified ... ..	...	...	...	...	...	43	2	3	3	51	24	18	4	12	109
Small-pox							—	—	—	—	—	—	—	—	—	—
Chicken-pox							—	—	—	—	—	—	—	—	—	—
Measles							—	—	—	—	—	4	9	38	99	150
Scarlet Fever							—	—	—	—	—	—	—	—	—	—
Whooping Cough							—	—	—	5	5	18	23	38	30	114
Diphtheria and Croup							1	—	1	—	2	—	—	2	1	5
Erysipelas							—	—	—	1	1	—	1	1	—	3
Tuberculous Meningitis							3	—	—	—	3	2	9	5	11	30
Abdominal Tuberculosis (b)							—	—	—	1	1	1	7	5	3	17
Other Tuberculous Diseases							—	—	1	—	1	—	2	3	1	7
Meningitis (not Tuberculous)							—	—	1	2	3	7	6	14	9	39
Convulsions							35	22	14	20	91	51	34	20	14	210
Laryngitis							—	—	—	—	—	—	—	—	1	1
Bronchitis							2	3	5	6	16	59	75	43	45	238
Pneumonia (all forms)							1	—	3	3	7	33	51	98	90	279
Diarrhoea,							—	2	1	1	4	29	55	36	36	160
Enteritis							1	4	3	6	14	37	50	29	31	161
Gastritis							1	1	—	3	5	7	16	4	1	33
Syphilis							2	4	3	3	12	21	11	7	1	52
Rickets							—	—	—	—	—	—	—	2	4	6
Suffocation, overlying							7	1	7	7	22	37	14	5	1	79
Injury at Birth							9	1	—	—	10	—	—	—	—	10
Atelectasis							19	4	5	1	29	3	—	—	—	32
Congenital Malformations (c)							30	13	6	2	51	12	3	5	2	73
Premature Birth							305	28	38	18	389	30	4	—	1	424
Atrophy, Debility and Marasmus... ..							70	26	20	20	136	109	112	55	26	438
Other Causes							32	15	12	14	73	45	41	34	27	220
							518	124	120	113	875	505	523	444	434	2781

Nett Births in the year { Legitimate ... 21,361
Illegitimate ... 803

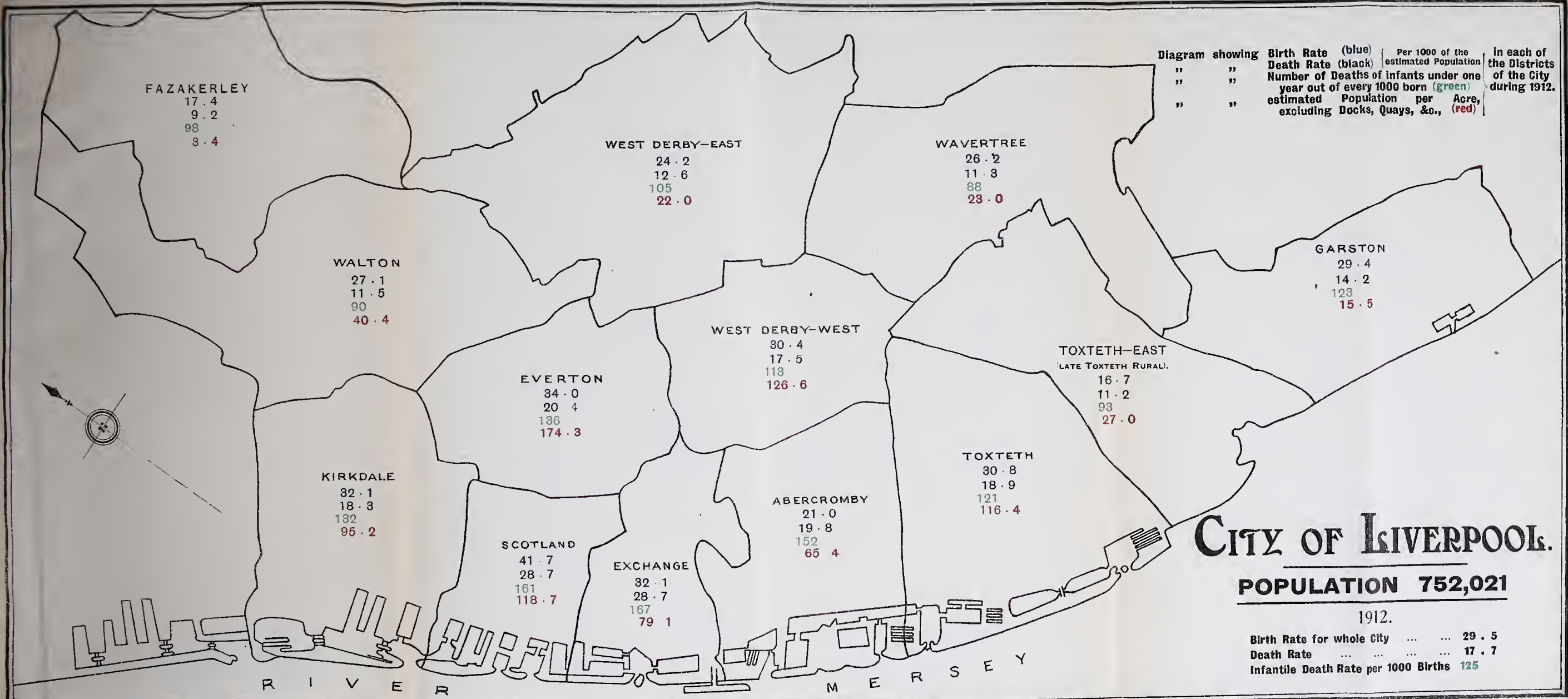
Nett Deaths in the year of { Legitimate Infants 2,601
Illegitimate Infants 180

NOTES TO TABLE IV.

- (a) The total in the last column of Table IV. equals the total in column 10 of Table I., and in column 3 of Table III.
- (b) Under Abdominal Tuberculosis are included deaths from Tuberculous Peritonitis and Enteritis and from *Tabes Mesenterica*.
- (c) The total deaths from Congenital Malformations, Premature Birth, Atrophy, Debility and Marasmus, equal the total in Table III. under the heading Congenital Debility and Malformation, including Premature Birth.

Want of Breast Milk is included under Atrophy and Debility.

- (d) For references to the meaning of any other headings, *see* notes attached to Table III.





E

DEATHS REGISTERED IN THE CITY OF LIVERPOOL.
DURING THE YEAR ENDING SATURDAY, 28TH DECEMBER, 1912.

[illegible]

NOTE.—All Deaths registered in the City whether of Residents or Non-residents are included in this Table

